

ORDINANCE NO. _____

An ordinance amending Title 26 - Building Code of the Los Angeles County Code by adopting the 2016 California Building Code by reference, with certain changes and modifications, and making other revisions thereto.

The Board of Supervisors of the County of Los Angeles ordains as follows:

SECTION 1. Sections 119.1.2 through 119.1.14 of Chapter 1, Chapters 2 through 35, Appendices C, I, and J and Appendix Chapter A1, which incorporate by reference and modify portions of the 2013 California Building Code, are hereby repealed.

SECTION 2. Chapter 1 is hereby amended to read as follows:

100 ADOPTION BY REFERENCE

Except as hereinafter changed or modified, Sections 1.2 through 1.14 of Chapter 1, Division I of that certain building code known and designated as the ~~2013~~2016 California Building Code, as published by the California Building Standards Commission are adopted by reference and incorporated into this Title 26 of the Los Angeles County Code as if fully set forth below, and shall be known as Sections 119.1.2 through 119.1.14, respectively of Chapter 1 of Title 26 of the Los Angeles County Code.

Except as hereinafter changed or modified, Chapters 2 through 35, Appendices C, I, and J of that certain building code known and designated as the ~~2013~~2016 California Building Code, as published by the California Building Standards Commission, are adopted by reference and incorporated into this Title 26 of the Los

Angeles County Code as if fully set forth below, and shall be known as Chapters 2 through 35, Appendices C, I, and J of Title 26 of the Los Angeles County Code.

A copy of said California Building Code, hereinafter referred to as the CBC, including the above-designated appendices, shall be at all times maintained by the Building Official for use and examination by the public.

101 TITLE, PURPOSE AND INTENT

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101.3 Scope. The provisions of this Code shall apply to the construction, alteration, moving, demolition, repair, use of any building or structure and grading within the unincorporated territory of the County of Los Angeles and to such work or use by the County of Los Angeles in any incorporated city not exercising jurisdiction over such work or use.

The provisions of this Code shall not apply to work located primarily in a public way other than pedestrian protection structures required by Chapter 33; public utility towers and poles; certain governmental agencies, special districts and public utilities as determined by the Building Official; equipment not specifically regulated in this Code; hydraulic flood control structures; or minor work of negligible hazard to life specifically exempted by the Building Official.

Additions, alterations, repairs, relocations, and changes of use or occupancy in all any existing buildings ~~and or~~ structures shall comply with the provisions for new buildings and structures except as otherwise provided in Section 109 and ~~Chapter 34 of~~ this Title 33 – Existing Building Code.

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102 UNSAFE BUILDINGS

102.1 Definition. All buildings or structures which are structurally unsound or not provided with adequate egress, or which constitute a fire hazard, or are otherwise dangerous to human life, or which in relation to existing use constitute a hazard to safety or health, or public welfare, by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster damage, lacking an approved water supply, hazardous electrical, unsafe gas piping or appliances, or abandonment as specified in this Code or any other effective ordinances, are, for the purpose of this Chapter, unsafe buildings. Whenever the Building Official determines by inspection that a building or structure, whether structurally damaged or not, is dangerous to human life by reason of being located in an area which is unsafe due to hazard from landslide, settlement, or slippage or any other cause, such building shall, for the purpose of this Chapter, be considered an unsafe building.

No person shall own, use, occupy or maintain any unsafe building.

All unsafe buildings are hereby declared to be public nuisances. In addition to instituting any appropriate action to prevent, restrain or correct a violation of this section, the Building Official may abate an unsafe condition ~~by~~ or order that the unsafe condition be secured, repaired, rehabilitationed, demolitionshed or removed as deemed necessary by the Building Official in accordance with the procedure specified in this chapterCode.

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102.2

Notice of Unsafe Building. The Building Official shall

examine or cause to be examined every building or structure or portion thereof reported as dangerous or damaged and, if, in the Building Official's opinion, such is found to be an unsafe building as defined in this Chapter, the Building Official shall give to the party concerned written notice stating the defects thereof. This notice may require the owner or person in charge of the building or premises, to:

1. Immediately remove, backfill, shore up or secure such unsafe condition, and/or

2. Within 48 hours, apply for required permit(s) and to commence either the required repairs or improvements or demolition and removal of the building or structure or portions thereof.

~~and a~~ All such work shall be completed within 90 days from date of notice, unless otherwise stipulated by the Building Official. If necessary, such notice shall also require the building, structure, or portion thereof to be vacated forthwith and not reoccupied until the required repairs and improvements are completed, inspected and approved by the Building Official.

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The Building Official may file record a notice of violation with the County Recorder's Office ~~a declaration~~ that the building or structure described has been inspected and found to be an unsafe building, as defined in this chapter, and that the owner thereof has been so notified. After all required work has been completed, the Building Official shall file record a notice rescinding the prior notice of violation with the County Recorder's Office, ~~a properly executed form terminating the above declaration.~~

102.3 Posting of Signs. The Building Official shall cause to be posted on buildings required to be vacated or remain unoccupied a notice of “Restricted Use” or “Unsafe – Do Not Enter or Occupy” as described in Section 102.6. All placards shall read “Department of Public Works, Building and Safety Division, County of Los Angeles”. ~~to read substantially as follows:-~~

~~“DO NOT ENTER. UNSAFE TO OCCUPY. Department of Public Works, Building and Safety Division, County of Los Angeles.”~~

Such notice shall be posted at the main entrance(s) and shall be visible to persons approaching the building or structure from a street. Such notice shall remain posted until the required repairs, demolition or removal are completed. Such notice shall not be removed without written permission of the Building Official and no person shall enter the building except for the purpose of making the required repairs or of demolishing the building.

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102.5.1 Work by county. If the repairs or demolition necessary to remove the unsafe condition as set forth in the Notice of Unsafe Building ~~is~~ is not made within the designated period and a hearing has not been requested by any party concerned, the Building Official shall request that a hearing be held regarding the unsafe condition. If the finding by the Building Board of Appeals is not complied with within the period designated by the Board, the Building Official may then secure or demolish ~~or repair~~ such portions of the structure, or may cause such work to be done, to the extent necessary to eliminate the hazard determined to exist by the Building Board

of Appeals.

102.5.2 Emergency procedure. Whenever any portion of a structure constitutes an immediate hazard to life or property, and in the opinion of the Building Official, the conditions are such that repairs, or demolition must be undertaken within less than the designated period, the Building Official may ~~make~~ take necessary action, such as performing alterations or, repairs, and/or demolish such portions demolition of the structures, ~~as are necessary~~ to protect life or property, or both, after giving such notice to the parties concerned as the circumstances will permit or without any notice whatever when, in the Building Official's opinion, immediate action is necessary.

102.5.3 Costs. The costs ~~involved~~ incurred by actions taken pursuant to Sections 102.5.1 and 102.5.2 ~~of such demolition or repair,~~ including the entire cost of the services rendered by the County, shall be a special assessment against the property upon which the structure stood. The Building Official shall notify, in writing, all parties concerned of the amount of such assessment resulting from such work. Within five days of the receipt of such notice, any such party concerned may file with the Building Official a written request for a hearing on the correctness or reasonableness, or both, of such assessment. Any party concerned who did not receive a notice pursuant to Section 102.2 and who has not had a hearing on the necessity of the demolition or repairs in such request for hearing also may ask that such necessity be reviewed. The Building Board of Appeals thereupon shall set the matter for hearing; give such party concerned notice thereof as provided in Section 102.4.2; hold such

hearing and determine the reasonableness or correctness of the assessment, or both; and if requested, determine the necessity of the demolition or repairs. The Building Board of Appeals, in writing, shall notify such party concerned of its decision. If the total assessment determined as provided for in this section is not paid in full within 10 days after receipt of such notice from the Building Official or the Building Board of Appeals, as the case may be, the Building Official shall record in the office of the Department of Registrar-Recorder a statement of the total balance still due and a legal description of the property. From the date of such recording, such balance due shall be a special assessment against the parcel.

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102.6 Posting of signs for damage assessment. The building official shall cause placard(s) to be posted on buildings upon completion of a safety assessment.

All placards shall read "Department of Public Works, Building and Safety Division, County of Los Angeles." The placards shall also indicate the condition of the structure for continued occupancy, and shall read substantially as follows:

1. "INSPECTED – Lawful Occupancy Permitted"(green placard) shall be posted on any building or structure wherein no apparent structural hazard has been found. This placard is not intended to mean that there is no damage to the building or structure.

2. "RESTRICTED USE" (yellow placard) shall be posted on each building or structure that has been damaged wherein the damage has resulted in some form of restriction to the continued occupancy. This placard will note in general terms the type

of damage encountered and will clearly and concisely note the restrictions on continued occupancy.

3. "UNSAFE – Do Not Enter or Occupy" (red placard) shall be posted on each building or structure that has been damaged such that the continued occupancy poses a threat to life safety. Buildings or structures posted with this placard shall not be entered under any circumstance except as authorized in writing by the Building Official, or his or her authorized representative. This placard is not to be used or considered as a demolition order. This placard will note in general terms the type of damage encountered.

Such notice shall be posted at the main entrance(s) and shall be visible to persons approaching the building or structure from a street. Such notice shall remain posted until the required repairs, demolition or removal are completed. Such notice shall not be removed without written permission of the Building Official and no person shall enter the building except for the purpose of making the required repairs or of demolishing the building.

103

VIOLATIONS AND PENALTIES

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103.4.2

Recordation. If (1) the Building Official determines that any property, building, or structure, or any part thereof is in violation of any provision of this Code; and if (2) the Building Official gives written notice as specified below of said violation; then the Building Official may have sole discretion to, at any time thereafter, record with the County Recorder's Office a notice that the property and/or any building

or structure located thereon is in violation of this Code.

Following the recordation of the notice of violation the Building Official is not required to conduct an inspection or review of the premises to determine the continued existence of the cited violation. It is the responsibility of the property owner, occupant or other similarly interested private party to comply with the above provisions.

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103.4.4 Rescission. Any person who desires to have recorded a notice rescinding the notice of violation must first obtain the necessary approvals and permit(s) to correct the violation. Once the Building Official determines that the work covered by such permit(s) has been satisfactorily completed, the Building Official may record a notice rescinding the prior notice of violation.

~~Following the recordation of the notice of violation the Building Official is not required to conduct an inspection or review of the premises to determine the continued existence of the cited violation. It is the responsibility of the property owner, occupant or other similarly interested private party to comply with the above provisions.~~

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103.6 Code Enforcement Appeals Board Hearing.

103.6.1 Right of Hearing. Any person having any right, title, lien or interest in the property or any part thereof, or the Building Official, may request a hearing regarding the proposed lien, the property, building or structure or portion thereof, after the building or property is posted. A request by any person other than the Building Official shall be made in writing to the Code Enforcement Appeals Board within

30 days after the building or property is posted. All persons who desire to be heard may appear before the Code Enforcement Appeals Board to show that the building or property is or is not in violation of any provision of this Code or to show cause why the building, even if in violation, should not be ordered built, rebuilt, repaired, rehabilitated, vacated or demolished. However, if they do not request in writing a hearing before the Code Enforcement Appeals Board within 30 days of notification, or if they fail to appear at such a hearing which they have requested, they will be deemed to have waived their right to a hearing before the Code Enforcement Appeals Board.

103.6.2 Pursuant to Government Code Section 54988, Subsection b (2), the Board of Supervisors has delegated to the Code Enforcement Appeals Board the hearing, regarding violations and penalties described in Section 103. The Code Enforcement Appeals Board will hold all such hearings, as are requested under Section 103.6, and will make written recommendations to the Board of Supervisors after each hearing. The Board of Supervisors may adopt the recommendations without further notice of hearing, or may set the matter for a de novo hearing before the Board of Supervisors.

103.7 **Hearing Code Enforcement Appeals Board.** The Code Enforcement Appeals Board shall hold a hearing and consider all competent evidence offered by any person pertaining to the matters set forth in the report of the Building Official.

The Code Enforcement Appeals Board shall make written findings of fact as to whether or not the property, building or structure is in violation of any provision of this Code as defined in this Chapter.

103.8 **Hearing Not Requested.** If neither the Building Official nor any other person requests a hearing and the violation as set forth in the written Notice is not abated within the time specified in such notice, the Building Official may demolish such portions of the structures, or may cause such other work to be done to the extent necessary to eliminate the hazards as defined in Section 102 or refer the case to the District Attorney or County Counsel for criminal or civil prosecution.

103.9 **Notice of Hearing.** If either the Building Official, or any other person, requests a hearing within the proper time as provided in Section 103.6.1 of this Code, the Code Enforcement Appeals Board shall hold such hearing. Not less than 10 days prior to the hearing the Building Official shall serve or cause to be served either in the manner required by law for the service of summons or by first class mail, postage prepaid, a copy of the Notice of Hearing upon every person to whom this Chapter requires that the Notice of Building Code Violation be served.

103.10 **Form and Contents of Notice.** The notice of hearing shall state:

1. The street address and a legal description sufficient for identification of the premises which is in violation of this Code or upon which the building is located.

2. The conditions because of which the Building Official believed that the building or property in violation.
3. The date, hour and place of the hearing.

103.11 **Posting of Notice.** The Building Official shall post one copy of the notice of hearing in a conspicuous place on the building involved, if any, otherwise on the property, not less than 10 days prior to the hearing.

103.12 **Notice of Order.**

103.12.1 When the Code Enforcement Appeals Board finds that the property, building or structure or portion thereof is in violation of this Code, the said Board shall order the abatement of this violation by obtaining a permit to build, rebuild, repaired, rehabilitated, demolish the building or structure or portion thereof or any grading. The order also may require that the building be vacated if found to be unsafe as defined in Section 102.

The order shall state a reasonable time within which the work shall be completed which shall not be less than 10 days after the service of this order. The Board, for good cause, may extend the time for completion in writing.

103.12.2 The Building Official, after determining that conditions warrant reconsideration, may bring any matter before the Board for rehearing. At such a rehearing, the Board will consider all evidence submitted and after such reconsideration may find that further postponement is unwarranted and so order, or may find that a new order for abatement and/or postponement of County action is warranted and order any abatement work considered necessary to be performed by a specified date, after which

date the Building Official may cause such work to be performed or completed without further notice.

103.13 Emergency Procedures. When in the opinion of the Building Official a substandard structure or portion thereof is an immediate hazard to life and property, and the abatement of such hazard requires action pursuant to the exception in Section 9910, the Building Official may then demolish the substandard building, or portion thereof, or may cause such other work to be done to the extent necessary to eliminate the hazard.

104 ORGANIZATION AND ENFORCEMENT

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104.2.1 General. The Building Official is hereby authorized and directed to enforce all the provisions of this Code, including the Electrical Code, the Plumbing Code, the Mechanical Code, the Residential Code, the Existing Building Code, and the Green Building Standards Code and to make all inspections pursuant to the provisions of each such Code. For such purposes, the Building Official shall have the powers of a law enforcement officer.

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104.2.3 Right of entry.

104.2.3.1 Whenever it is necessary to make an inspection to enforce any of the provisions of or perform any duty imposed by this Code or other applicable law, or whenever the Building Official or an authorized representative has reasonable cause to believe that there exists in any building, ~~or~~ structure, or grading, or upon any

premises any condition which makes such building, ~~or structure, or~~ grading, or premises hazardous, unsafe, or dangerous for any reason specified in this Code or other similar laws, the Building Official or an authorized representative hereby is authorized to enter such property at any reasonable time and to inspect the same and perform any duty imposed upon the Building Official by this Code or other applicable law; provided that (i) if such property is occupied, then the Building Official shall first present proper credentials to the occupant and request entry explaining the reasons therefor; and (ii) if such property is unoccupied, then the Building Official shall first make a reasonable effort to locate the owner or other persons having charge or control of the property and request entry, explaining the reasons therefor.

If such entry cannot be obtained because the owner or other person having charge or control of the property cannot be found after due diligence or if entry is refused, then the Building Official or an authorized representative shall have recourse to every remedy provided by law to secure lawful entry and inspect the property.

104.2.3.2 Notwithstanding the foregoing, if the Building Official or an authorized representative has reasonable cause to believe that the building, or grading, or premises is so hazardous, unsafe or dangerous as to require immediate inspection to safeguard the public health or safety, the Building Official shall have the right to immediately enter and inspect such property, and may use any reasonable means required to effect such entry and make such inspection, whether such property ~~be~~ is occupied or unoccupied and whether or not permission to inspect has been obtained. If the property is occupied, the Building Official shall first present credentials to the

occupant and demand entry, explaining the reasons therefor and the purpose of the inspection.

104.2.3.3 “Authorized representative” shall include the officers named in ~~Subsection~~ 104.2.2 and their authorized inspection personnel.

104.2.3.4 No person shall fail or refuse, after proper demand has been made upon such person as provided in this subsection, to promptly permit the Building Official or an authorized representative to make any inspection provided for by Section 104.2.3.2. Any person violating ~~this subdivision~~ Section 104.2.3 shall be guilty of a misdemeanor.

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104.2.7 Modifications. Whenever there are practical difficulties involved in carrying out the provisions of this Code, the Building Official ~~may~~ shall have the authority to grant modifications on a case by case basis, upon application of the owner or the owner’s authorized agent, provided the Building Official shall first find that a special individual reason makes the strict letter of this Code impractical and that the modification is in conformity with the spirit and purpose of this Code and that such modification does not lessen any fire-protection or other life-safety-related requirements, accessibility, or any degree of structural integrity. The details of any action granting modifications shall be recorded and entered in the files of the code enforcement agency.

A written application for ~~the granting of such a~~ a modifications shall be submitted together with a filing fee of \$231.00. When ~~actual~~ staff review exceeds two hours, an

additional fee of \$115.50 per hour shall be charged for each hour or fraction thereof in excess of two hours.

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104.2.8 Alternate Materials, Designs, and Methods of

Construction. The provisions of this Code are not intended to prevent the use of any material, appliances, installation, device, arrangement, design, or method of construction not specifically prescribed by this Code.

The Building Official may approve on a case by case basis, any such alternate, provided that he or she finds that the material, appliance, installation, device, arrangement, design, or method of construction or work offered is, for the purpose intended, at least the equivalent of that prescribed in this Code in quality, strength, effectiveness, fire resistance, and other life-safety factors, durability, planning and design, energy, material resource efficiency and conservation, environmental air quality, performance, water, and sanitation.

The Building Official shall require that sufficient evidence or proof be submitted to substantiate any claims that may be made regarding its use.

A written application for use of an alternate material, design or method of construction shall be submitted together with a filing fee of \$231.00. When actual staff review exceeds two hours, an additional fee of \$115.50 per hour shall be charged for each hour or fraction thereof in excess of two hours.

~~For the requirements as an approved fabricator see Sections 202 and 1702.1.~~

104.2.9 Tests. Whenever there is insufficient evidence of

compliance with the provisions of this Code or evidence that any material or any construction does not conform to the requirements of this Code, or in order to substantiate claims for alternate materials or methods of construction, the Building Official may require tests as proof of compliance to be made at the expense of the owner or the owner's agent by an approved agency.

Test methods shall be as specified by this Code for the material in question. If there are no appropriate test methods specified in this Code, the Building Official shall determine the test procedure.

~~Reports of such test shall be retained by the Building Official in accordance with the County's guidelines for the retention of public records.~~

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104.2.11 Demolition. Whenever the term “demolition” or “demolish” is used in this Code, it shall include the removal of the resulting debris from such demolition, the proper abandonment of any sewer or sewage disposal system when applicable, and the protection or filling of excavations exposed by such demolition as may be required by this Code or other ordinances or laws.

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104.3 Definitions. Whenever any of the names or terms defined in this section are used in this Code, each such name or term shall be deemed and construed to have the meaning ascribed to it in this section.

BUILDING DEPARTMENT shall mean the Building and Safety Division of the Department of Public Works.

BUILDING OFFICIAL shall mean Director of Public Works or other designated authority charged with the administration and enforcement of this Code, or the Building Official's duly authorized representative.

BUILDING REHABILITATION APPEALS BOARD shall mean Property Rehabilitation Appeals Board.

ELECTRICAL CODE shall mean Title 27 of the Los Angeles County Code.

EXISTING BUILDING CODE shall mean Title 33 of the Los Angeles County Code.

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105 APPEALS BOARDS

105.1 Building Board of Appeals.

105.1.1 General. Unless otherwise provided for below, in order to conduct the hearings provided for in this Code, there shall be a Building Board of Appeals consisting of five members who are qualified by experience and training to pass upon matters pertaining to building construction. One member shall be a practicing architect, one a competent builder who is a licensed general contractor, one a lawyer, and two shall be structural engineers, each of whom shall have had at least 10 years' experience as an architect, builder, lawyer, or structural engineer. The Building Official shall be an *ex officio* member and shall act as secretary to the Board. The members of the Building Board of Appeals shall be appointed by the Board of Supervisors and shall hold office at its pleasure. The Building Board of Appeals shall adopt reasonable rules

and regulations for conducting its investigations. Each member of the Board shall be compensated for each meeting attended as provided from time to time by the County Code.

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105.3 Building Rehabilitation Appeals Board. ~~There shall be a Building Rehabilitation Appeals Board as defined by Section 9906. In order to conduct the hearings provided for in Section 102.4, Chapters 98, and 99 of this Code, there shall be and is hereby created a Building Rehabilitation Appeals Board. The Building Rehabilitation Appeals Board shall consist of five members who are qualified to pass on matters pertaining to substandard buildings and property. The members of the Board shall be appointed by and hold office at the pleasure of the Board of Supervisors and may recommend such new legislation as deemed necessary. The Board shall adopt reasonable rules and regulations for conducting its investigations. The Building Official shall be an *ex officio* nonvoting member and act as secretary. The Building Official shall keep a record of all proceedings and notify all parties concerned of the findings and decisions of the Board.~~

Every member of the Building Board of Appeals established by Section 105.1 is an *ex officio* alternate member of the Building Rehabilitation Appeals Board and may serve in the place and stead of any regular member of the Building Rehabilitation Appeals Board who is absent from any meeting and, at such meeting, shall be deemed to be a regular member of the Building Rehabilitation Appeals Board.

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105.6 **Tenure.** The tenure of appointed members of the Building Board of Appeals, Accessibility Appeals Board, and Building Rehabilitation Appeals Board shall be subject to the provisions of Section 5.12.050 of Title 5 of the Los Angeles County Code.

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106 **PERMITS**

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106.3 **Work Exempted.**

1. One-story detached accessory buildings used as tool and storage sheds, playhouses, shade structures, and similar uses, provided the gross floor area does not exceed 120 square feet (11.15 m²), the height does not exceed 12 feet (3.69_m), and the maximum roof projection does not exceed 24 inches (610 mm).
2. Fences ~~not over 6 feet (1.8 m) in height~~ which are not used as a barrier to private swimming pools, spas or hot tubs-, and monument signs, provided that:
 - 2.1 Masonry or concrete fences do not exceed 42 inches (1067 mm) in height.
 - 2.2 Fences constructed of other materials do not exceed 6 feet (1.8 m) in height.
 - 2.3 Monument signs do not exceed 6 feet (1.8 m) in height.
3. ~~Water~~Steel tanks not storing hazardous material as defined in the Fire Code supported on a foundation not more than two feet above ~~directly on grade~~

when the capacity does not exceed 5,000 gallons and the ratio of overall height to diameter or width does not exceed 1½:1 times the diameter.

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15. Decks~~Platforms~~, walks and driveways not more than 30 inches (762 mm) above grade, not over any basement or story below, and which are not part of an accessible route.

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17. Playground equipment not to exceed 12 feet (3.69 m) in height accessory to Group R-3 occupancy.

18. One-story detached animal cages and ~~buildings or structures used as dog kennels, chicken coops, and animal pens or shade structures~~ provided the gross floor area does not exceed ~~120~~ 400 square feet (~~11.15~~ 37.2 m²) and the height does not exceed 6 feet (~~1,829 mm~~), and at least one horizontal dimension does not exceed 12 feet (3.69 m).

19. Non-combustible livestock shelters provided the gross floor area does not exceed 300 square feet (27.9 m²), the height does not exceed 12 feet (3.69 m), and at least 3 sides are open.

20. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work where disabled access requirements do not apply.

21. Nonfixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches (1753 mm) in height.

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106.4 Application for Permits.

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106.4.2 Plans and specifications. Within each application for a building permit, and when required by the Building Official for enforcement of any provisions of this Code, ~~two sets of~~ complete plans and specifications shall be submitted. The Building Official may require plans and specifications to be prepared and designed by an engineer, architect or landscape architect licensed or registered by the state to practice as such. Submittals shall include special construction inspection and structural observation statements ~~requirements as defined in Section 106.4.5~~ required by Chapter 17.

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106.4.3 Information on plans and specifications. Construction documents shall be dimensioned and drawn to scale upon suitable material. Electronic media documents are permitted to be submitted ~~when approved by the Building Official.~~ Construction documents shall be of sufficient ~~clarify~~ clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this Code and relevant laws, ordinances, rules and regulations, as determined by the Building Official. The first sheet of each set of plans shall give the house and street address of the work and the name and address of the owner and persons who prepare them. Plans shall include a plot plan showing the location of the proposed building and of every existing building on the property. In lieu of detailed specifications, the Building Official may approve references on the plans to a specific

section or part of this Code or other ordinances or laws.

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106.4.5 ~~Inspection program.~~ When special inspection is required by Chapter 17, the architect or engineer of record shall prepare an inspection program which shall be submitted to the Building Official for approval prior to issuance of the building permit. The inspection program shall designate the portions of the work that require special inspection and indicate the duties of the special inspectors.

The special inspector may be employed by the owner, the engineer or architect of record, or an agent of the owner, but shall not be employed by the contractor, the contractor's employees, representatives or agents, or any other person performing the work.

When structural observation is required by Chapter 17, the inspection program shall name the individuals or firms who are to perform structural observation and describe the stages of construction at which structural observation is to occur.

The inspection program shall include samples of inspection reports and provide time limits for submission of reports.

106.5 Permits.

106.5.1 Issuance. The application, plans and specifications, geological or engineering reports and other required data filed by an applicant for a permit shall be checked by the Building Official. Such plans may be reviewed by other departments of the County to verify compliance with the laws and ordinances under their jurisdiction.

The Building Official shall issue a permit to the applicant for the work described in the application and plans filed therewith when the Building Official is satisfied that all of the following items comply:

1. The work described conforms to the requirements of this Code.
2. The work described conforms to the requirements of other pertinent laws and ordinances.
3. The fees specified by this Code have been paid.
4. The applicant has obtained a permit pursuant to Public Resources Code Section 30600 *et seq.*, if such a permit is required.

When the Building Official issues the permit, the Building Official shall endorse in writing or stamp on the both sets of plans and specifications "APPROVED". Such approved plans and specifications shall not be changed, modified or altered without authorization from the Building Official, and all work shall be done in accordance with the approved plans. The issuance of a permit shall not be deemed to certify that the site of the described work is safe.

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106.5.4 Expiration. Every permit issued by the Building Official under the provisions of this Code shall expire by limitation and become null and void, if the building or work authorized by such permit is not commenced within 180 days from the date of such permit, or the building or work authorized by such permit is suspended or abandoned for a period of 180 days, or the permittee fails to obtain inspection as required by the provisions of Section 108 of this Code for a period of 180 days.

Exception: Permits issued to abate violation(s) in conjunction with a code enforcement action shall expire and become null and void at a date determined by the Building Official.

The Building Official may extend the time for action by the permittee for a period not exceeding 180 days from the date of expiration upon written request from the permittee and payment of a fee in an amount determined by the Building Official, not to exceed 25 percent of the permit fee. No permit shall be extended more than twice.

Once a permit, including any extension(s) thereof, has expired the permittee shall file a new application as specified in Section 106.4.

Permits for rebound tumbling equipment as defined in Chapter 66 shall be valid for a period of not exceeding one year. Permits for portable amusement devices and for temporary ~~Group A-4 or~~ Group A-5 structures shall be valid for a period not exceeding 30 days. Permits for amusement devices erected under a building permit shall be valid for a period of 90 days.

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106.5.6 Combined building permit. A combined building permit may be issued for new one-family or two-family dwellings and attached garages, and additions and alterations to one-family or two-family dwellings and attached garages, which will include all building, electrical, plumbing, heating, ventilating and air-conditioning work but will not include grading and landscape, which require permits under Appendix J of this Code; or sewer connections. The combined building permit shall be subject to the requirements of this Code, the Residential Code, the Existing

Building Code, the Green Building Standards Code, the Electrical Code, the Plumbing Code and the Mechanical Code, except that the fee for the combined building permit shall be as provided in Section 107.1 of this Code.

106.5.7 Combined swimming pool permit. A combined swimming pool permit may be issued for a new swimming pool, spa or hot tub which will include all building, electrical, plumbing, heating and excavation work. The combined swimming pool permit shall be subject to the requirements of this Code, the Residential Code, the Existing Building Code, the Green Building Standards Code, the Electrical Code, the Plumbing Code and the Mechanical Code, except that the fee for the combined swimming pool permit shall be as provided in Section 107.1 of this Code.

107 FEES

107.1 Building Permit Fees. In addition to a permit issuance fee of \$29.20, a fee for each building permit shall be paid to the Building Official as set forth in Table 1-A.

The determination of value or valuation under any of the provisions of this Code shall be made by the Building Official. The valuation to be used in computing the permit and plan check fees shall be the total value of all construction work for which the permit is issued, as well as all finish work, painting, roofing, electrical, plumbing, heating, air conditioning, elevators, fire protection systems and any other permanent work or permanent equipment.

EXCEPTIONS:

1. ~~A combined swimming pool permit may be issued for a new swimming pool, spa or hot tub which will include all building, electrical, plumbing, heating and excavation work.~~ The total permit fee for the a combined swimming pool permit, as provided in Section 106.5.7, shall be two times the building permit fee determined from Table 1-A and the barrier inspection fee of Section 107.9, Item 1 K.

2. The total permit fee for a combined building permit, as provided in Section 106.5.6, shall be 1.60 times the building permit fee determined from Table 1-A.

107.2 Plan Checking or Review Fees for Buildings or

Structures. When an application for a building permit is submitted for review, ~~whether or not plans and specifications are required by Section 106.4.2,~~ a fee shall be paid to the Building Official. Said fee shall be equal to 85 percent of the building permit fee as set forth in Table 1-A, provided, however, that the minimum fee shall be \$86.30.

...

107.9 Other Fees. The following fees shall be paid before a permit is issued, inspection made, occupancy allowed or device operated:

1. In addition to the fees set forth in Items A through K, below, for
issuance of each inspection application receipt \$29.20
- A. For a site inspection not otherwise covered herein by a fee and
which is regulated by the Los Angeles County Code..... \$444.20

B. For inspection of any use, occupancy or change in use or occupancy:

Group R or U Occupancy \$230.60

Occupancy groups other than R or U

Affected floor area:

Less than 5,000 square feet (464.5 m²) \$568.20

5,001 to 10,000 square feet (464.6 m² to 929 m²) \$683.70

10,001 to 100,000 square feet (929.9 m² to 9290.3 m²) \$1,136.80

Above 100,000 ft² square feet (9290.3 m²)..... \$1,723.10

C. ~~Reserved~~For inspection of the repair or rehabilitation of a building or structure declared substandard by notice filed with the Department of Registrar-Recorder the fee shall be as set forth in

Table 1-A, but shall not be less than \$401.40

D. For inspection of the demolition of a building or structure (including sewage system termination).....

\$172.30

E. For inspection or reinspection of ~~Group A-4 or~~, Group A-5

structures, each..... \$230.60

...

107.19 Fee Exemption – Affordable Housing

...

BUILDING FEE shall include plan check, permit and inspection fees required by Titles 26, 27, 28, 29, 30 and 31, and 33 of the Los Angeles County Code.

...

108 INSPECTIONS

...

108.4.1 General. Reinforcing steel or structural framework of any part of any building or structure shall not be covered or concealed without first obtaining the approval of the Building Official.

~~Protection of joints and penetrations in fire-resistive assemblies shall not be concealed from view until inspected and approved.~~

Excavation and foundation reinforcement shall not be covered or concealed without first obtaining the approval of the Building Official.

Upon notification from the permit holder or the permit holder's agent, the Building Official shall make the following inspections as set forth in Sections 108.4.2 through 108.4.8.

108.4.2 Foundation inspection. Inspection shall be made after excavations for footings ~~are~~^{is} complete and any required reinforcing steel is in place. For concrete foundations, any required forms shall be in place prior to inspection. All materials for the foundation shall be on the job site; however, where concrete is ready mixed in accordance with approved nationally recognized standards, the concrete need not be on the job site. Where the foundation is to be constructed of approved treated wood, additional inspections may be required by the Building Official.

...

108.4.4 Frame inspection. Inspection shall be made after the roof, roof deck or sheathing, all framing, braced walls, fire blocking and bracing are in place and all conduits, plumbing pipes, chimneys and vents to be concealed are complete and the rough electrical, plumbing, and heating wires, conduits, plumbing pipes, and ducts are approved.

...

108.4.6 Fire- and smoke-resistant penetrations. Inspection shall be made after all protection of joints and penetrations in fire resistance rated assemblies, smoke barriers and smoke partitions is installed, but prior to concealing of said joints and penetrations.

108.4.7 Energy efficiency elements. Inspections shall be made after the insulation, fenestration, duct insulation, and mechanical and plumbing equipment has been installed, but prior to any of said elements being concealed.

108.4.6 108.4.8 Final inspection. Inspection shall be made after finish grading and the building is completed and ready for occupancy.

...

108.6 Special Inspector. Before commencing duties, the special inspector shall be examined and shall obtain a certificate of registration from the Building Official. As to the written portion of the required examination, the Building Official may administer a written examination or the Building Official may require that a special inspector applicant successfully complete an examination administered by the International Code Council (ICC). Applications shall be made

in writing and shall be accompanied by a fee of \$257.70. When the Building Official requires the ICC Certificate in lieu of administering a written examination, the application shall be accompanied by proof of the required Certificate and a fee of \$160.20. A separate application and a separate fee shall be required for each type of work, and shall be valid for one year from the application submission date. Requests for refund shall be made within 30 days of expiration of the application only for applicants who did not take the exam. Refunds shall not be granted for applicants who fail to appear for a scheduled exam. Applicants failing to pass an examination shall be ineligible for re-examination for a period of 30 days. Applicants failing to pass an examination for a second time shall be ineligible for re-examination for a period of 180 days, at which time a A new application and fee shall accompany ~~each~~ the request for re-examination. Unless sooner revoked, certificates of registration for special inspectors shall expire biennially on June 30, and must be renewed by payment of biennial renewal fee of \$106.60. Registration issued from January 1 through June 30 in renewal years shall be valid through June 30 of the successive biennial period.

...

108.7 Inspection Requests. It shall be the duty of the permit holder to notify the Building Official that work authorized by a permit is ready for inspection. The Building Official may require that every request for inspection be filed at least one working day before such inspection is desired. Such request may be in writing or by telephone at the option of the Building Official.

...

108.8 Non-inspected Work. No person shall own, use, occupy or maintain any structure on which “Non-inspected Work” has been performed.

For the purposes of this Code, “Non-inspected Work” shall be defined as any erection, construction, enlargement, alteration, repair, movement, improvement, removal, connection, conversion, demolition or equipping, for which a permit was first obtained, pursuant to Section 106.1 supra, but which has progressed beyond the point indicated in successive inspections, including but not limited to inspections set forth in Section 108.4, 108.5 and eChapter 17, without first obtaining inspection and approval of the Building Official.

108.9 Reinspections. An inspection fee may be assessed, as determined by the Building Official, for any of the following reasons:

1. When such portion of work for which inspection is requested is not complete.
2. When corrections given by the Building Official are not completed upon a subsequent requested inspection.
3. Failure to provide adequate work site access on the date for which inspection is requested.
4. The inspection record card is not posted or otherwise available on the work site.
5. The approved plans are not readily available to the inspector.

6. Work has deviated from the approved plans and has not been approved by the Building Official.

This section is not to be interpreted as requiring additional hourly inspection fees for the first time a job is rejected for failure to comply with the requirements of this code.

To obtain reinspection, the applicant shall pay the hourly inspection fee as provided in Section 107.9. No additional inspection of the work will be performed until the required fees have been paid.

109 USE AND OCCUPANCY

...

109.2 Change in Use. Changes in the character or use of a building shall not be made except as specified in the Existing Building Code, Section 3406 of this Code.

109.3 Certificate Issued. When the building or structure has passed final inspection, and when the building or structure complies with the applicable laws and regulations, and the required fees have been paid, the Building Official shall issue a ~~C~~ertificate of ~~O~~ccupancy which shall contain the following:

1. The building ~~permit~~ or miscellaneous occupancy ~~occupancy~~ permit number.
2. The address of the building or structure.
3. The name and address of the owner.
4. A description of that portion of the building for which the certificate is issued.

5. A statement that the described portion of the building complies with the requirements of this Code for group and division of occupancy and the use for which the proposed occupancy is classified.
6. The name of the Building Official.

109.4 Temporary Certificate. If the Building Official finds that no substantial hazard will result from occupancy of any building or portion thereof before the same is completed, the Building Official may issue a Temporary Certificate of Occupancy for the use of a portion or portions of a building or structure prior to the completion of the entire building or structure. A request for the issuance of a temporary certificate of occupancy must be made in writing.

Such temporary certificate of occupancy shall be valid for a period not to exceed three months. Upon request of the owner or permittee the Building Official may, in writing, extend the temporary certificate of occupancy when it is determined that the circumstances so warrant. After the expiration of a temporary certificate of occupancy and any extension(s) thereof, the building or structure shall not be used or occupied until the Building Official has approved the building for such use or occupancy.

109.5 Posting. The certificate of occupancy shall be posted in a conspicuous place on the premises and shall not be removed except by the Building Official.

EXCEPTION: Group R-3, and Group U Occupancies.

109.5.1 Live loads posted. Prior to the issuance of the certificate of occupancy, a live load sign shall be posted. Where the floor or roof live loads for which

each floor or portion thereof of a commercial or industrial building is or has been designed to exceed 50 psf, such designed live loads shall be conspicuously posted by the owner in ~~a~~that the part of each story in which they apply, using durable signs. It shall be unlawful to remove or deface such notices.

110 PROHIBITED USES OF BUILDING SITES

110.1 Flood Hazard.

110.1.1

...

4. If design flood elevations are not included on the community's Flood Insurance Rate Map (FIRM), the ~~b~~Building ~~e~~Official and the applicant shall obtain and reasonably utilize any design flood elevation and floodway data available from other sources;

5. Upon placement of the lowest floor, including basement, and prior to further vertical construction, the ~~b~~Building ~~e~~Official shall require submission of documentation, prepared and sealed by a registered design professional, of the elevation of the lowest floor, including basement.

...

110.2 Geotechnical Hazards.

...

110.2.2 Except as provided in Section 110.2.3, work requiring a building or grading permit by this Code is not permitted in an area determined by the Building Official to be subject to hazard from landslide, settlement or slippage. For the

purpose of this Section, landslide, settlement or slippage does not include surface displacement due to the earthquake faults.

...

110.2.3.3 When the proposed work involves the alteration or ~~minor~~ repair of existing structures and the cost of such alteration or repair does not exceed 25 percent of the current market value of the existing structure, such value to be based on assumed continuation of the established legal use. Before a permit may be issued pursuant to this section, the owner shall do all of the following:

1. If required by the Building Official, submit an engineering geology and/or soils engineering report or reports that contain(s), at a minimum, a qualitative and/or conditional finding that the proposed work complies with the provisions of Section 110.2.1 of this Code.

...

110.2.3.4 When the proposed work involves an addition or additions to an existing structure but is not a change in use or occupancy and such work does not increase the gross floor area of the structure by more than 25 percent of the area of the structure as it existed on July 6, 1968, and the Building Official determines that the proposed work will not impact a historically active landslide. This section shall not apply to buildings constructed after July 6, 1968. Before a permit may be issued pursuant to this section, the owner shall do all of the following:

...

110.2.3.7 When the proposed work involves a one-story, detached,

light-framed structure not intended or used for human occupancy, such as a garage, carport, patio cover, deck, or storage shed accessory to a single-family residence
~~structure not intended or used for human occupancy and not exceeding 400 square feet in gross floor area nor 12 feet in height.~~ Before a permit may be issued pursuant to this section, the owner shall do all of the following:

1. ~~When~~If required by the Building Official, submit an engineering geology and/or soils engineering report or reports that contain(s), at a minimum, a qualitative and/or conditional finding that the proposed work complies with the provisions of Section 110.2.1.

...

110.2.3.11 When the proposed work involves a minor alteration or repair to an existing Group R-3 Occupancy building and/or its accessory structures.

Minor alterations and repairs shall include the following:

1. Roof mount photovoltaic solar systems that impose no more than 5 percent gravity load increase to the existing building,
- 2., Ground mount photovoltaic solar systems,
3. Recovering and reroofings,
4. New and replacement mechanical and plumbing equipment,
5. Window change-outs, and
6. Similar work as determined by the Building Official for the purpose of this provision only.

...

110.4 Methane Gas Hazards. Permits shall not be issued for new buildings or enclosed structures regulated by this Code on, adjacent to, or within 300 feet (91.44 m) of active, abandoned or idle oil or gas well(s) unless designed according to recommendations contained in a report prepared by a registered design professional, such as a licensed civil engineer and/or a licensed petroleum engineer, to evaluate whether, such wells are being properly operated or maintained, or are abandoned. No permits shall be issued until documentation of proper operation, maintenance, or abandonment or reabandonment is submitted to and approved by the Building Official

Exceptions:

1. When approved by the Building Official, mitigation of methane gas hazards shall not be required for additions or alterations to existing buildings or structures located no closer than 200 feet (60.96 m) to active, abandoned or idle oil or gas well(s).
2. Grading permits may be issued when the proposed work is necessary to mitigate the methane gas hazard.

...

**TABLE 1-C
GRADING PLAN CHECK FEES**

BASED ON VOLUME OF MATERIALS HANDLED	FEE
1-1,000 yd ³ (1 m ³ – 764.6 m ³)	\$302.00 plus \$102.70/ 100 yd ³ (76.5 m ³) or fraction thereof in excess of 100 yd ³ (76.5 m ³)
1,001-10,000 yd ³ (765.3 m ³ - 7645.5 m ³)	\$1,229.30 plus \$85.20/1,000 yd ³ (764.6 m ³) or fraction thereof in excess of 1,000 yd ³ (764.6 m ³)
10,001-100,000 yd ³ (7646.3 m ³ - 76 455 m ³)	\$1,996.40 plus \$50.30/1,000 yd ³ (764.6 m ³) or fraction thereof in excess of 10,000 yd ³ (7645.5 m ³)
100,001-500,000 yd ³ (76 456 m ³ – 382 275 m ³)	\$6,534.80 plus \$139.10/10,000 yd ³ (764.6 m ³) or fraction thereof

500,001 yd ³ (76 456 <u>382 278</u> m ³) or more	in excess of 100,000 yd ³ (76 455 m ³) \$12,097.40 plus \$126.40/10,000 yd ³ (764.6 m ³) or fraction thereof in excess of 500,000 yd ³ (382 275 m ³)
---	--

**TABLE 1-F
CODE ENFORCEMENT FEES**

SERVICE	FEE
1 - Investigation and Processing	\$343.50
2 - Preparation of job specifications	\$460.00
3 - Board of Supervisors or City Council approval	\$233.50
4 - Contract cancellation	\$239.80
5 - Contract performance inspection	\$183.70
6 - For processing a 45-day letter	\$465.70
7 - For processing a Notice of Violation	\$370.10
8 - For processing a Rescission of Notice of Violation	\$318.40
9 - Billing	\$137.20
10 - Record Special Assessment <u>Lien</u>	\$137.20
11 - Filing of Special Assessment	\$232.70

...

SECTION 3. Chapter 7A is hereby amended to read as follows:

CHAPTER 7A [SFM]

MATERIALS AND CONSTRUCTION METHODS FOR EXTERIOR WILDFIRE

EXPOSURE

Note: This Chapter has been amended by Los Angeles County and is applicable to all occupancy groups.

SECTION 4. Section 701A.1 is hereby amended to read as follows:

701A.1 Scope.

This ~~e~~Chapter applies to building materials, systems, and/or assemblies used in the exterior design and construction of new buildings ~~located~~, and to additions, alterations, or repairs made to existing buildings, erected, constructed, or moved within

a Wildland-Urban Interface Fire Area as defined in Section 702A.

SECTION 5. Section 701A.3 is hereby amended to read as follows:

701A.3 Application.

New buildings, and any additions, alterations, or repairs made to existing buildings located in or moved within any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland-Urban Interface Fire Area designated by the enforcing agency Los Angeles County Fire Department constructed after the application date shall comply with the provisions of this ~~e~~Chapter.

Exceptions:

...

4. ~~Additions to and remodels of buildings originally constructed prior to the applicable application date.~~

SECTION 6. Section 701A.3.1 is hereby amended to read as follows:

701A.3.1 Application date and where required.

New buildings for which an application for a building permit is submitted on or after July 1, 2008, and any additions, alterations, or repairs made to existing buildings for which an application for a building permit is submitted on or after January 1, 2017, located in any Fire Hazard Severity Zone or Wildland Interface Fire Area shall comply with all ~~s~~Sections of this ~~e~~Chapter, including all of the following areas:

...

Exceptions:

1. ~~New b~~Buildings located in any Fire Hazard Severity Zone within State

Responsibility Areas, for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all ~~s~~Sections of this ~~e~~Chapter.

2. ~~New~~bBuildings located in any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland Interface Fire Area designated by cities and other local agencies for which an application for a building permit is submitted on or after December 1, 2005, but prior to July 1, 2008, shall only comply with the following ~~s~~Sections of this ~~e~~Chapter:

...

SECTION 7. Section 701A.4 is hereby amended to read as follows:

701A.4 Inspection and certification.

Building permit applications and final completion approvals for buildings within the scope and application of this ~~e~~Chapter shall comply with the following:

1. Building permit issuance. The ~~local~~bBuilding ~~e~~Official shall, prior to construction, provide the owner or applicant a certification that the building as proposed to be built complies with all applicable state and local building standards, including those for materials and construction methods for wildfire exposure as described in this ~~e~~Chapter. Issuance of a building permit by the ~~local~~bBuilding ~~e~~Official for the proposed building shall be considered as complying with this ~~s~~Section.

2. Building permit final. The ~~local~~bBuilding ~~e~~Official shall, upon completion of construction, provide the owner or applicant with a copy of the final inspection report that demonstrates the building was constructed in compliance with all applicable state and local building standards, including those for materials and construction methods for

wildfire exposure as described in this ~~e~~Chapter. Issuance of a certificate of occupancy by the local ~~b~~Building ~~e~~Official for the proposed building shall be considered as complying with this ~~s~~Section.

SECTION 8. Section 702A is hereby amended to read as follows:

702A DEFINITIONS

. . .

FIRE PROTECTION PLAN is a document prepared for a specific project or development proposed for a Wildland-Urban Interface Fire Area. It describes ways to minimize and mitigate potential for loss from wildfire exposure.

The Fire Protection Plan shall be in accordance with this ~~e~~Chapter and the ~~California~~Los Angeles County Fire Code, Title 32, Chapter 49. When required by the enforcing agency for the purposes of granting modifications, a fire protection plan shall be submitted. ~~Only locally adopted ordinances that have been filed with the California Building Standards Commission or the Department of Housing and Community Development in accordance with Section 1.1.8 shall apply.~~

FIRE HAZARD SEVERITY ZONES are geographical areas designated pursuant to California Public Resources Codes Sections 4201 through 4204 and classified as Very High, High, or Moderate in State Responsibility Areas or as Local Agency Very High Fire Hazard Severity Zones designated pursuant to California Government Code ~~S~~Sections 51175 through 51189. See ~~California~~Los Angeles County Fire Code Chapter 49.

. . .

WILDLAND-URBAN INTERFACE FIRE AREA is a geographical area identified by the state as a "Fire Hazard Severity Zone" in accordance with the Public Resources Code ~~S~~sections 4201 through 4204 and Government Code ~~S~~sections 51175 through 51189, or other areas designated by the ~~enforcing agency~~ Los Angeles County Fire Department to be at a significant risk from wildfires.

SECTION 9. Section 703A.2 is hereby amended to read as follows:

703A.2 Qualification by testing.

Material and material assemblies tested in accordance with the requirements of Section 703A shall be accepted for use when the results and conditions of those tests are met. Product evaluation testing of material and material assemblies shall be approved or listed by the State Fire Marshal, the Building Official, or identified in a current report issued by an approved agency.

SECTION 10. Section 703A.3 is hereby amended to read as follows:

703A.3 Approved agency.

Product evaluation testing shall be performed by an approved agency as defined in Section 1702. The scope of accreditation for the approved agency shall include building product compliance with this eCode.

SECTION 11. Section 703A.5.2 is hereby amended to read as follows:

703A.5.2 Weathering.

Fire-retardant-treated wood ~~and fire-retardant-treated wood shingles and shakes~~ shall meet the fire test performance requirements of this eChapter after being subjected to the weathering conditions contained in the following standards, as

applicable to the materials and the conditions of use.

SECTION 12. Section 703A.5.2.2 is hereby deleted in its entirety.

~~**703A.5.2.2 Fire-retardant-treated wood shingles and shakes.**~~

~~Fire-retardant-treated wood shingles and shakes shall be approved and listed by the State Fire Marshal in accordance with Section 208(c), Title 19 California Code of Regulations.~~

SECTION 13. Section 703A.6 is hereby amended to read as follows:

703A.6 Alternates for materials, design, tests, and methods of construction.

The enforcing agency is permitted to modify the provisions of this eChapter for site-specific conditions in accordance with Chapter 1, Section 4.11.2.4~~104.2.7~~. When required by the enforcing agencyBuilding Official for the purposes of granting modifications, a fire protection plan shall be submitted in accordance with the ~~California~~ Fire Code, Chapter 49.

SECTION 14. Section 704A.3 is hereby amended to read as follows:

704A.3 Alternative methods for determining ignition-resistant material.

...

~~3. Fire-retardant-treated wood shingles and shakes. Fire-retardant-treated wood shingles and shakes, as defined in section 1505.6 and listed by State Fire Marshal for use as "Class B" roof covering, shall be accepted as an Ignition-resistant wall covering material when installed over solid sheathing.~~

SECTION 15. Section 705A.2 is hereby amended to read as follows:

705A.2 Roof coverings.

Roof coverings shall be Class A as specified in Section 1505.2. Where the roof profile allows a space between the roof covering and roof decking, the spaces shall be constructed to prevent the intrusion of flames and embers, be firestopped with approved materials or have one layer of minimum 72 pound (32.4 kg) mineral-surfaced non-perforated cap sheet complying with ASTM D 3909 installed over the combustible decking. Wood shingles and wood shakes are prohibited in any Fire Hazard Severity Zones regardless of classification.

SECTION 16. Section 706A.3 is hereby amended to read as follows:

706A.3 Ventilation openings on the underside of eaves and cornices.

...

Exceptions:

...

2. The ~~enforcing agency~~Building Official may accept or approve special eave and cornice vents that resist the intrusion of flame and burning embers.

...

SECTION 17. Section 710A.3.2 is hereby amended to read as follows:

710A.3.2

When required by the ~~enforcing agency~~Building Official, detached accessory structures within 50 feet of an applicable building shall comply with the requirements of

this ~~s~~Section.

SECTION 18. Section 710A.4 is hereby amended to read as follows:

710A.4 Requirements.

When required by the ~~enforcing agency~~ Building Official, accessory structures shall be constructed of noncombustible or ignition-resistant materials.

SECTION 19. Section 1030.4 is hereby amended to read as follows:

1030.4 Operational constraints.

...

Where security bars (burglar bars) are installed on emergency egress and rescue windows or doors, ~~on or after July 1, 2000~~, such devices shall comply with California Building Standards Code, Part 12, Chapter 12-3 and other applicable provisions of Part 2.

SECTION 20. Section 1507.3.1 is hereby amended to read as follows:

1507.3.1 Deck requirements.

Concrete and clay tile shall be installed only over solid ~~sheathing or spaced~~ structural sheathing boards.

SECTION 21. Table 1507.3.7 is hereby amended to read as follows:

TABLE 1507.3.7

CLAY AND CONCRETE TILE ATTACHMENT^{a, b, c}

GENERAL – CLAY OR CONCRETE ROOF TILE			
Maximum Nominal Design Wind Speed, V_{asf} (mph)	Mean roof height (feet)	Roof slope up to <3:12	Roof slope 3:12 and over
85	0 - 60	<i>Minimum slope: 2.5:12</i>	Two fasteners per tile. Only one fastener on slopes of 7:12 and less for tiles with installed weight exceeding 7.5 lbs/sq. ft. having a width no greater than 16 inches.
100	0 - 40	One fastener per tile. Flat tile without vertical laps. Two fasteners per tile.	

...		
INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS^{d, e} (Installations on spaced/solid sheathing with battens or spaced sheathing)				
Maximum Nominal Design Wind Speed, V_{asf} (mph)	Mean roof height (feet)	Roof slope up to <5:12	Roof slope 5:12<12:12	Roof slope 12:12 and over
85	0 - 60	Fasteners are not required. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.	One fastener per tile every other row. All perimeter tiles require one fastener. Tiles with installed weight less than 9 lbs./sq.ft. require a minimum of one fastener per tile.	One fastener required for every tile. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.
100	0 - 40	<u>All Minimum</u> roof slopes 4 units vertical in 12 units horizontal		
...		
INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS (Installations on solid sheathing without battens)				
Maximum Nominal Design Wind Speed, V_{asf} (mph)	Mean roof height (feet)	<u>All Minimum</u> roof slopes 4 units vertical in 12 units horizontal <u>Maximum slope 7 units vertical in 12 units horizontal</u>		
...		

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s, 1 pound per square foot = 4.882 kg/m².

^a Minimum fastener size. ~~Hot dipped galvanized ring shank or other~~ Corrosion-resistant nails not less than No. 11 gage with ⁵/₁₆-inch head. Fasteners shall be long enough to penetrate into the sheathing ³/₄ inch or through the thickness of the sheathing, whichever is less. Attaching wire for clay and concrete tile shall not be smaller than 0.083 inch and shall be copper, brass or stainless steel.

SECTION 22. Section 1613.7 is hereby added to read as follows:

1613.7 Modifications to ASCE 7

The text of ASCE 7 shall be modified as indicated in Sections 1613.7.1 through 1613.7.4.

1613.7.1 ASCE 7, 12.12.3.

Modify ASCE 7 Equation 12.12-1 of Section 12.12.3 to read as follows:

$$\delta_M = \frac{C_d \delta_{\max}}{I_e}$$

(Equation 12.12-1)

1613.7.2 ASCE 7, 12.2.3.1, Exception 3.

Modify ASCE 7, Section 12.2.3.1, Exception 3 to read as follows:

3. Detached one- and two-family dwellings up to two stories in height of light frame construction.

1613.7.3 ASCE 7, Section 12.11.2.2.3.

Modify ASCE 7, Section 12.11.2.2.3, to read as follows:

12.11.2.2.3 Wood diaphragms.

In wood diaphragms, the continuous ties shall be in addition to the diaphragm sheathing. Anchorage shall not be accomplished by use of toe nails or nails subject to withdrawal nor shall wood ledgers or framing be used in cross-grain bending or cross-grain tension. The diaphragm sheathing shall not be considered effective as providing ties or struts required by this Section.

For structures assigned to Seismic Design Category D, E, or F, wood diaphragms supporting concrete or masonry walls shall comply with the following:

1. The spacing of continuous ties shall not exceed 40 feet. Added chords of diaphragms may be used to form subdiaphragms to transmit the anchorage forces to the main continuous crossties.

2. The maximum diaphragm shear used to determine the depth of the subdiaphragm shall not exceed 75 percent of the maximum diaphragm shear.

1613.7.4 ASCE 7, Section 12.8.1.3.

Modify ASCE 7, Section 12.8.1.3, to read as follows:

~~**12.8.1.3 Maximum S_s Value in Determination of C_s .** For regular structures five stories or less above the base as defined in Section 11.2 and with a period, T , of 0.5 s~~

or less, C_s is permitted to be evaluated using the larger of either S_s equal to 1.5 or 80 percent of the value of S_s determined per Section 11.4.1 or 11.4.7.

12.8.1.3 Maximum S_{DS} Value in Determination of C_s and E_v .

The value of C_s and E_v are permitted to be calculated using a value of S_{DS} equal to 1.0 but not less than 70% of S_{DS} as defined in Section 11.4.4, provided that all of the following criteria are met:

1. The structure does not have irregularities, as defined in Section 12.3.2;
2. The structure does not exceed five stories above the lower of the base or grade plane as defined in Section 11.2, and, where present, each mezzanine level shall be considered a story for the purpose of this limit;
3. The structure has a fundamental period, T , that does not exceed 0.5 seconds, as determined using Section 12.8.2;
4. The structure meets the requirements necessary for the redundancy factor, ρ , to be permitted to be taken as 1.0, in accordance with Section 12.3.4.2;
5. The site soil properties are not classified as Site Classes E or F, as defined in Section 11.4.2; and
6. The structure is classified as Risk Category I or II, as defined in Section 1.5.1.

SECTION 23. Section 1613.8 is hereby added to read as follows:

1613.8 Seismic design provisions for hillside buildings.

1613.8.1 Purpose.

The purpose of this Section is to establish minimum regulations for the design and construction of new buildings and additions to existing buildings when constructing

such buildings on or into slopes steeper than one unit vertical in three units horizontal (33.3 percent). These regulations establish minimum standards for seismic force resistance to reduce the risk of injury or loss of life in the event of earthquakes.

1613.8.2 Scope.

The provisions of this Section shall apply to the design of the lateral-force-resisting system for hillside buildings at and below the base level diaphragm. The design of the lateral-force-resisting system above the base level diaphragm shall be in accordance with the provisions for seismic and wind design as required elsewhere in this Chapter.

Exceptions:

1. Non-habitable accessory buildings and decks not supporting or supported from the main building are exempt from these regulations.
2. Additions to existing buildings that do not exceed 10 percent of the existing floor area provided that the addition is being supported completely by the existing foundation.

1613.8.3 Definitions.

For the purposes of this Section certain terms are defined as follows:

BASE LEVEL DIAPHRAGM is the floor at, or closest to, the top of the highest level of the foundation.

DIAPHRAGM ANCHORS are assemblies that connect a diaphragm to the adjacent foundation at the uphill diaphragm edge.

DOWNHILL DIRECTION is the descending direction of the slope approximately

perpendicular to the slope contours.

FOUNDATION is concrete or masonry which supports a building, including footings, stem walls, retaining walls, and grade beams.

FOUNDATION EXTENDING IN THE DOWNHILL DIRECTION is a foundation running downhill and approximately perpendicular to the uphill foundation.

HILLSIDE BUILDING is any building or portion thereof constructed on or into a slope steeper than one unit vertical in three units horizontal (33.3 percent). If only a portion of the building is supported on or into the slope, these regulations apply to the entire building.

PRIMARY ANCHORS are diaphragm anchors designed for and providing a direct connection as described in Sections 1613.8.5 and 1613.8.7.3 between the diaphragm and the uphill foundation.

SECONDARY ANCHORS are diaphragm anchors designed for and providing a redundant diaphragm to foundation connection, as described in Sections 1613.8.6 and 1613.8.7.4.

UPHILL DIAPHRAGM EDGE is the edge of the diaphragm adjacent and closest to the highest ground level at the perimeter of the diaphragm.

UPHILL FOUNDATION is the foundation parallel and closest to the uphill diaphragm edge.

1613.8.4 Analysis and design.

1613.8.4.1 General.

Every hillside building within the scope of this Section shall be analyzed,

designed, and constructed in accordance with the provisions of this Chapter. When the code-prescribed wind design produces greater effects, the wind design shall govern, but detailing requirements and limitations prescribed in this Section and all referenced Sections shall be followed.

1613.8.4.2 Base level diaphragm-downhill direction.

The following provisions shall apply to the seismic analysis and design of the connections for the base level diaphragm in the downhill direction.

1613.8.4.2.1 Base for lateral force design defined.

For seismic forces acting in the downhill direction, the base of the building shall be the floor at, or closest to, the top of the highest level of the foundation.

1613.8.4.2.2 Base shear.

In developing the base shear for seismic design, the response modification coefficient (R) shall not exceed 5 for bearing wall and building frame systems. The total base shear shall include the forces tributary to the base level diaphragm including forces from the base level diaphragm.

1613.8.5 Base shear resistance-primary anchors.

1613.8.5.1 General.

The base shear in the downhill direction shall be resisted through primary anchors from diaphragm struts provided in the base level diaphragm to the foundation.

1613.8.5.2 Location of primary anchors.

A primary anchor and diaphragm strut shall be provided in line with each foundation extending in the downhill direction. Primary anchors and diaphragm struts shall also be provided where interior vertical lateral-force-resisting elements occur above and in contact with the base level diaphragm. The spacing of primary anchors and diaphragm struts or collectors shall in no case exceed 30 feet (9,144 mm).

1613.8.5.3 Design of primary anchors and diaphragm struts.

Primary anchors and diaphragm struts shall be designed in accordance with the requirements of Section 1613.8.8.

1613.8.5.4 Limitations.

The following lateral-force-resisting elements shall not be designed to resist seismic forces below the base level diaphragm in the downhill direction:

1. Wood structural panel wall sheathing;
2. Cement plaster and lath;
3. Gypsum wallboard; and
4. Tension-only braced frames.

Braced frames designed in accordance with the requirements of Section 2205.2.2 may be used to transfer forces from the primary anchors and diaphragm struts to the foundation provided lateral forces do not induce flexural stresses in any member of the frame or in the diaphragm struts. Deflections of frames shall account for the variation in slope of diagonal members when the frame is not rectangular.

1613.8.6 Base shear resistance-secondary anchors.

1613.8.6.1 General.

In addition to the primary anchors required by Section 1613.8.5, the base shear in the downhill direction shall be resisted through secondary anchors in the uphill foundation connected to diaphragm struts in the base level diaphragm.

Exception: Secondary anchors are not required where foundations extending in the downhill direction spaced at not more than 30 feet (9,144 mm) on center extend up to and are directly connected to the base level diaphragm for at least 70 percent of the diaphragm depth.

1613.8.6.2 Secondary anchor capacity and spacing.

Secondary anchors at the base level diaphragm shall be designed for a minimum force equal to the base shear, including forces tributary to the base level diaphragm, but not less than 600 pounds per lineal foot (8.76 kN/m). The secondary anchors shall be uniformly distributed along the uphill diaphragm edge and shall be spaced a maximum of four feet (1,219 mm) on center.

1613.8.6.3 Design.

Secondary anchors and diaphragm struts shall be designed in accordance with Section 1613.8.8.

1613.8.7 Diaphragms below the base level-downhill direction.

The following provisions shall apply to the lateral analysis and design of the connections for all diaphragms below the base level diaphragm in the downhill direction.

1613.8.7.1 Diaphragm defined.

Every floor level below the base level diaphragm shall be designed as a diaphragm.

1613.8.7.2 Design force.

Each diaphragm below the base level diaphragm shall be designed for all tributary loads at that level using a minimum seismic force factor not less than the base shear coefficient.

1613.8.7.3 Design force-resistance-primary anchors.

The design force described in Section 1613.8.7.2 shall be resisted through primary anchors from diaphragm struts provided in each diaphragm to the foundation.

Primary anchors shall be provided and designed in accordance with the requirements and limitations of Section 1613.8.5.

1613.8.7.4 Design force-resistance-secondary anchors.

1613.8.7.4.1 General.

In addition to the primary anchors required in Section 1613.8.7.3, the design force in the downhill direction shall be resisted through secondary anchors in the uphill foundation connected to diaphragm struts in each diaphragm below the base level.

Exception: Secondary anchors are not required where foundations extending in the downhill direction, spaced at not more than 30 feet (9,144 mm) on center, extend up to and are directly connected to each diaphragm below the base level for at least 70 percent of the diaphragm depth.

1613.8.7.4.2 Secondary anchor capacity.

Secondary anchors at each diaphragm below the base level diaphragm shall be designed for a minimum force equal to the design force but not less than 300 pounds per lineal foot (4.38 kN/m). The secondary anchors shall be uniformly distributed along the uphill diaphragm edge and shall be spaced a maximum of four feet (1,219 mm) on center.

1613.8.7.4.3 Design.

Secondary anchors and diaphragm struts shall be designed in accordance with Section 1613.8.8.

1613.8.8 Primary and secondary anchorage and diaphragm strut design.

Primary and secondary anchors and diaphragm struts shall be designed in accordance with the following provisions:

1. Fasteners. All bolted fasteners used to develop connections to wood members shall be provided with square plate washers at all bolt heads and nuts. Washers shall be minimum 0.229 inch by 3 inches by 3 inches (5.82 mm by 76 mm by 76 mm) in size. Nuts shall be tightened to finger tight plus one half (1/2) wrench turn prior to covering the framing.
2. Fastening. The diaphragm to foundation anchorage shall not be accomplished by the use of toenailing, nails subject to withdrawal, or wood in cross-grain bending or cross-grain tension.
3. Size of Wood Members. Wood diaphragm struts, collectors, and other wood members connected to primary anchors shall not be less than three-inch (76 mm) nominal width. The effects of eccentricity on wood members shall be evaluated as required per Item 9.
4. Design. Primary and secondary anchorage, including diaphragm struts, splices, and collectors shall be designed for 125 percent of the tributary force.
5. Allowable Stress Increase. The allowable stress increase permitted under Section 1605.3.2 shall not be taken when the working (allowable) stress design method is used.
6. Steel Element of Structural Wall Anchorage System. The strength design forces for steel elements of the structural wall anchorage system, with the exception of anchor bolts and reinforcing steel, shall be increased by 1.4 times the forces otherwise

required.

7. Primary Anchors. The load path for primary anchors and diaphragm struts shall be fully developed into the diaphragm and into the foundation. The foundation must be shown to be adequate to resist the concentrated loads from the primary anchors.

8. Secondary Anchors. The load path for secondary anchors and diaphragm struts shall be fully developed in the diaphragm but need not be developed beyond the connection to the foundation.

9. Symmetry. All lateral force foundation anchorage and diaphragm strut connections shall be symmetrical. Eccentric connections may be permitted when demonstrated by calculation or tests that all components of force have been provided for in the structural analysis or tests.

10. Wood Ledgers. Wood ledgers shall not be used to resist cross-grain bending or cross-grain tension.

1613.8.9 Lateral-force-resisting elements normal to the downhill direction.

1613.8.9.1 General.

In the direction normal to the downhill direction, lateral-force-resisting elements shall be designed in accordance with the requirements of this Section.

1613.8.9.2 Base shear.

In developing the base shear for seismic design, the response modification coefficient (R) shall not exceed 5 for bearing wall and building frame systems.

1613.8.9.3 Vertical distribution of seismic forces.

For seismic forces acting normal to the downhill direction the distribution of seismic forces over the height of the building using Section 12.8.3 of ASCE 7 shall be determined using the height measured from the top of the lowest level of the building foundation.

1613.8.9.4 Drift limitations.

The story drift below the base level diaphragm shall not exceed 0.007 times the story height at strength design force level. The total drift from the base level diaphragm to the top of the foundation shall not exceed 3/4 inch (19 mm). Where the story height or the height from the base level diaphragm to the top of the foundation varies because of a stepped footing or story offset, the height shall be measured from the average height of the top of the foundation. The story drift shall not be reduced by the effect of horizontal diaphragm stiffness.

1613.8.9.5 Distribution of lateral forces.

1613.8.9.5.1 General.

The design lateral force shall be distributed to lateral-force-resisting elements of varying heights in accordance with the stiffness of each individual element.

1613.8.9.5.2 Wood structural panel sheathed walls.

The stiffness of a stepped wood structural panel shear wall may be determined by dividing the wall into adjacent rectangular elements, subject to the same top of wall deflection. Deflections of shear walls may be estimated by AWC SDPWS Section 4.3.2. Sheathing and fastening requirements for the stiffest section shall be used for the entire

wall. Each section of wall shall be anchored for shear and uplift at each step. The minimum horizontal length of a step shall be eight feet (2438 mm) and the maximum vertical height of a step shall be two feet, eight inches (813 mm).

1613.8.9.5.3 Reinforced concrete or masonry shear walls.

Reinforced concrete or masonry shear walls shall have forces distributed in proportion to the rigidity of each section of the wall.

1613.8.9.6 Limitations.

The following lateral force-resisting-elements shall not be designed to resist lateral forces below the base level diaphragm in the direction normal to the downhill direction:

1. Cement plaster and lath;
2. Gypsum wallboard; and
3. Tension-only braced frames.

Braced frames designed in accordance with the requirements of Section 2205.2.1.2 of this Code may be designed as lateral-force-resisting elements in the direction normal to the downhill direction, provided lateral forces do not induce flexural stresses in any member of the frame. Deflections of frames shall account for the variation in slope of diagonal members when the frame is not rectangular.

1613.8.10 Specific design provisions.

1613.8.10.1 Footings and grade beams.

All footings and grade beams shall comply with the following:

1. Grade beams shall extend at least 12 inches (305 mm) below the lowest

adjacent grade and provide a minimum 24-inch (610 mm) distance horizontally from the bottom outside face of the grade beam to the face of the descending slope.

2. Continuous footings shall be reinforced with at least two No. 4 reinforcing bars at the top and two No. 4 reinforcing bars at the bottom.

3. All main footing and grade beam reinforcement steel shall be bent into the intersecting footing and fully developed around each corner and intersection.

4. All concrete stem walls shall extend from the foundation and be reinforced as required for concrete or masonry walls.

1613.8.10.2 Protection against decay and termites.

All wood to earth separation shall comply with the following:

1. Where a footing or grade beam extends across a descending slope, the stem wall, grade beam, or footing shall extend up to a minimum 18 inches (457 mm) above the highest adjacent grade.

Exception: At paved garage and doorway entrances to the building, the stem wall need only extend to the finished concrete slab, provided the wood framing is protected with a moisture proof barrier.

2. Wood ledgers supporting a vertical load of more than 100 pounds per lineal foot (1.46 kN/m) and located within 48 inches (1219 mm) of adjacent grade are

prohibited. Galvanized steel ledgers and anchor bolts, with or without wood nailers, or treated or decay resistant sill plates supported on a concrete or masonry seat, may be used.

1613.8.10.3 Sill plates.

All sill plates and anchorage shall comply with the following:

1. All wood framed walls, including nonbearing walls, when resting on a footing, foundation, or grade beam stem wall, shall be supported on wood sill plates bearing on a level surface.
2. Power-driven fasteners shall not be used to anchor sill plates except at interior nonbearing walls not designed as shear walls.

1613.8.10.4 Column base plate anchorage.

The base of isolated wood posts (not framed into a stud wall) supporting a vertical load of 4000 pounds (17.8 kN) or more and the base plate for a steel column shall comply with the following:

1. When the post or column is supported on a pedestal extending above the top of a footing or grade beam, the pedestal shall be designed and reinforced as required for concrete or masonry columns. The pedestal shall be reinforced with a minimum of four No. 4 bars extending to the bottom of the footing or grade beam. The top of exterior pedestals shall be sloped for positive drainage.
2. The base plate anchor bolts or the embedded portion of the post base, and the vertical reinforcing bars for the pedestal, shall be confined with two No. 4 or three No. 3 ties within the top five inches (127 mm) of the concrete or masonry

pedestal. The base plate anchor bolts shall be embedded a minimum of 20 bolt diameters into the concrete or masonry pedestal. The base plate anchor bolts and post bases shall be galvanized and each anchor bolt shall have at least two galvanized nuts above the base plate.

1613.8.10.5 Steel beam to column supports.

All steel beam to column supports shall be positively braced in each direction. Steel beams shall have stiffener plates installed on each side of the beam web at the column. The stiffener plates shall be welded to each beam flange and the beam web. Each brace connection or structural member shall consist of at least two 5/8 inch (15.9 mm) diameter machine bolts.

SECTION 24. Section 1704.2.3 is hereby amended to read as follows:

1704.2.3 Statement of special inspections.

The applicant shall submit a statement of special inspections in accordance with Section ~~107.4~~106.4, as a condition for permit issuance. This statement shall be in accordance with Section 1704.3.

...

SECTION 25. Section 1704.6 is hereby amended to read as follows:

1704.6 Structural observations.

Where required by the provisions of Section 1704.6.1 or 1704.6.2, the owner or the owner's authorized agent shall employ a ~~registered design professional~~structural observer to perform structural observations. Structural observation does not include or waive the responsibility for the inspections in Section ~~110~~108 or the special inspections

in Section 1705 or other ~~s~~Sections of this ~~e~~Code. The structural observer shall be one of the following individuals:

1. The registered design professional responsible for the structural design, or
2. A registered design professional designated by the registered design professional responsible for the structural design.

Prior to the commencement of observations, the structural observer shall submit to the ~~b~~Building ~~e~~Official a written statement identifying the frequency and extent of structural observations.

~~At the conclusion of the work included in the permit, the structural observer shall submit to the building official a written statement that the site visits have been made and identify any reported deficiencies that, to the best of the structural observer's knowledge, have not been resolved.~~

The owner or owner's authorized agent shall coordinate and call a preconstruction meeting between the structural observer, contractors, affected subcontractors, and special inspectors. The structural observer shall preside over the meeting. The purpose of the meeting shall be to identify the major structural elements and connections that affect the vertical and lateral load resisting systems of the structure and to review scheduling of the required observations. A record of the meeting shall be included in the report submitted to the Building Official.

Observed deficiencies shall be reported in writing to the owner or owner's authorized agent, special inspector, contractor, and the Building Official. Upon the form prescribed by the Building Official, the structural observer shall submit to the Building

Official a written statement at each significant construction stage stating that the site visits have been made and identifying any reported deficiencies which, to the best of the structural observer's knowledge, have not been resolved. A final report by the structural observer which states that all observed deficiencies have been resolved is required before acceptance of the work by the Building Official.

SECTION 26. Section 1704.6.1 is hereby amended to read as follows:

1704.6.1 Structural observations for seismic resistance.

...

3. ~~The structure is assigned to Seismic Design Category E, is classified as Risk Category I or II, and is greater than two stories one stories above grade plane a~~
lateral design is required for the structure or portion thereof.

Exception: One-story wood framed Group R-3 and Group U Occupancies less than 2,000 square feet in area, provided the adjacent grade is not steeper than 1 unit vertical in 10 units horizontal (10 percent sloped), assigned to Seismic Design Category D.

...

SECTION 27. Section 1705.3 is hereby amended to read as follows:

1705.3 Concrete Construction.

Special inspections and tests of concrete construction shall be performed in accordance with this ~~s~~Section and Table 1705.3.

Exception: Special inspections and tests shall not be required for:

1. Isolated spread concrete footings of buildings three stories or less above

grade plane that are fully supported on earth or rock where the structural design of the footing is based on a specified compressive strength (f'c) not greater than 2,500 pounds per square inch (psi) (17.2 Mpa) regardless of the compressive strength specified in the construction documents or used in the footing construction.

...

4. ~~Concrete foundation walls constructed in accordance with Table 1807.1.6.2.~~

54. Concrete patios, ~~driveways~~ and sidewalks, on grade.

SECTION 28. Section 1705.12 is hereby amended to read as follows:

1705.12 Special inspections for seismic resistance.

...

Exception: The special inspections specified in Sections 1705.12.1 through 1705.12.9 are not required for structures designed and constructed in accordance with one of the following:

...

3. The structure is a detached one- or two-family dwelling not exceeding two stories above grade plane, provided the structure is not assigned to Seismic Design Category D, E, or F and does not have any of the following horizontal or vertical irregularities in accordance with Section 12.3 of ASCE 7:

...

SECTION 29. Section 1807.1.4 is hereby amended to read as follows:

1807.1.4 Permanent wood foundations systems.

Permanent wood foundation systems shall be designed and installed in accordance with AWC PWF. Lumber and plywood shall be treated in accordance with AWPA U1 (Commodity Specification A, Use Category 4B and Section 5.2) and shall be identified in accordance with Section 2303.1.9.1. Permanent wood foundation systems shall not be used for structures assigned to Seismic Design Category D, E, or F.

SECTION 30. Section 1807.1.6 is hereby amended to read as follows:

1807.1.6 Prescriptive design of concrete and masonry foundation walls.

Concrete and masonry foundation walls that are laterally supported at the top and bottom shall be permitted to be designed and constructed in accordance with this sSection. Prescriptive design of foundation walls shall not be used for structures assigned to Seismic Design Category D, E, or F.

SECTION 31. Section 1809.3 is hereby amended to read as follows:

1809.3 Stepped footings.

...

For structures assigned to Seismic Design Category D, E, or F, the stepping requirement shall also apply to the top surface of grade beams supporting walls.
Footings shall be reinforced with four No. 4 reinforcing bars. Two bars shall be located at the top and bottom of the footings as shown in Figure 1809.3.

SECTION 32. Figure 1809.3 is hereby added to read as follows:

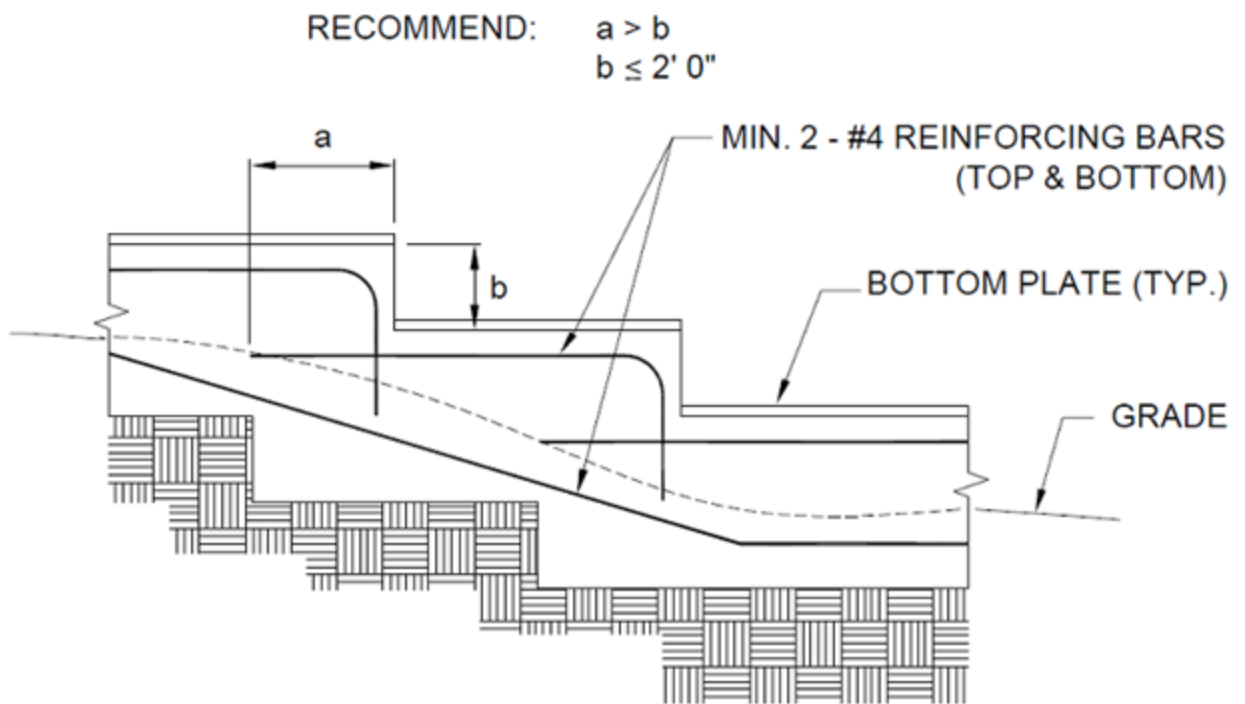


FIGURE 1809.3

STEPPED FOOTING

SECTION 33. Section 1809.7 is hereby amended to read as follows:

1809.7 Prescriptive footings for light-frame construction.

Where a specific design is not provided, concrete or masonry-unit footings supporting walls of light-frame construction shall be permitted to be designed in accordance with Table 1809.7. Prescriptive footings in Table 1809.7 shall not exceed one story above grade plane for structures assigned to Seismic Design Category D, E, or F.

SECTION 34. Table 1809.7 is hereby amended to read as follows:

TABLE 1809.7
PRESCRIPTIVE FOOTINGS SUPPORTING WALLS OF
LIGHT-FRAME CONSTRUCTION ^{a, b, c, d, e}

NUMBER OF FLOORS SUPPORTED BY THE FOOTING ^f	WIDTH OF FOOTING (inches)	THICKNESS OF FOOTING (inches)
1	12	6
2	15	6
3	18	8 ^g

...

c. ~~Interior stud-bearing walls shall be permitted to be supported by isolated footings. The footing width and length shall be twice the width shown in this table, and footings shall be spaced not more than 6 feet on center.~~ [Reserved].

...

g. ~~Plain concrete footings for Group R-3 occupancies shall be permitted to be 6 inches thick.~~

SECTION 35. Section 1809.12 is hereby amended to read as follows:

1809.12 Timber footings.

Timber footings shall be permitted for buildings of Type V construction and as otherwise approved by the ~~b~~Building ~~e~~Official. Such footings shall be treated in accordance with AWPA U1 (Commodity Specification A, Use Category 4B). Treated timbers are not required where placed entirely below permanent water level, or where used as capping for wood piles that project above the water level over submerged or marsh lands. The compressive stresses perpendicular to grain in untreated timber

footings supported upon treated piles shall not exceed 70 percent of the allowable stresses for the species and grade of timber as specified in the AWC NDS. Timber footings shall not be used in structures assigned to Seismic Design Category D, E, or F.

SECTION 36. Section 1810.3.2.4 is hereby amended to read as follows:

1810.3.2.4 Timber.

Timber deep foundation elements shall be designed as piles or poles in accordance with AF&PA AWC NDS. Round timber elements shall conform to ASTM D 25. Sawn timber elements shall conform to DOC PS-20. Timber shall not be used in structures assigned to Seismic Design Category D, E or F.

SECTION 37. Section 1905.1 is hereby amended to read as follows:

1905.1 General.

The text of ACI 318 shall be modified as indicated in Sections 1905.1.1 through ~~1905.1.4~~ 1905.1.11.

SECTION 38. Section 1905.1.3 is hereby amended to read as follows:

1905.1.3 ACI 318, Section 18.5.

...

18.5.2.4 – In structures assigned to SDC D, E, or F, intermediate precast wall panels and wall piers shall be designed in accordance with 18.10.8 or 18.14 in ACI 318.

SECTION 39. Section 1905.1.7 is hereby amended to read as follows:

1905.1.7 ACI 318, Section 14.1.4.

Delete ACI 318, Section 14.1.4, and replace with the following:

...

14.1.4.1 – Structures assigned to Seismic Design Category C, D, E or F shall not have elements of structural plain concrete, except as follows:

(a) ~~Structural plain concrete basement, foundation or other walls below the base as defined in ASCE 7 are permitted in detached one and two family dwellings three stories or less in height constructed with stud bearing walls. In dwellings assigned to Seismic Design Category D or E, the height of the wall shall not exceed 8 feet (2438 mm), the thickness shall not be less than 7½ inches (190 mm), and the wall shall retain no more than 4 feet (1219 mm) of unbalanced fill. Walls shall have reinforcement in accordance with 14.6.1. Concrete used for fill with a minimum cement content of two (2) sacks of Portland cement or cementitious material per cubic yard.~~

(b) Isolated footings of plain concrete supporting pedestals or columns are permitted, provided the projection of the footing beyond the face of the supported member does not exceed the footing thickness.

Exception: ~~In detached one and two family dwellings three stories or less in height, the projection of the footing beyond the face of the supported member is permitted to exceed the footing thickness.~~

(c) Plain concrete footings supporting walls are permitted provided the footings have at least two continuous longitudinal reinforcing bars. Bars shall not be smaller than No. 4 and shall have a total area of not less than 0.002 times the gross cross-sectional area of the footing. ~~For footings that exceed 8 inches (203 mm) in thickness, a~~ A minimum of one bar shall be provided at the top and bottom of the footing. Continuity of reinforcement shall be provided at corners and intersections.

Exceptions:

~~1. In Seismic Design Categories A, B and C, d~~Detached one- and two-family dwellings three stories or less in height and constructed with stud-bearing walls, are permitted to have plain concrete footings without longitudinal reinforcement with at least two continuous longitudinal reinforcing bars not smaller than No. 4 are permitted to have a total area of less than 0.002 times the gross cross-sectional area of the footing.

~~2. For foundation systems consisting of a plain concrete footing and a plain concrete stemwall, a minimum of one bar shall be provided at the top of the stemwall and at the bottom of the are footing.~~

~~3. Where a slab on ground is cast monolithically with the footing, one No. 5 bar is permitted to be located at either the top of the slab or bottom of the footing.~~

SECTION 40. Section 1905.1.8 is hereby amended to read as follows:

1905.1.8 ACI 318, Section 17.2.3.

These requirements shall be applicable to all buildings. Modify ACI 318 Sections 17.2.3.4.2, 17.2.3.4.3 (d) and 17.2.3.5.2 to read as follows:

...

SECTION 41. Section 1905.1.9 is hereby added to read as follows:

1905.1.9 ACI 318, Section 18.7.5.

Modify ACI 318, Section 18.7.5, by adding Section 18.7.5.8 and 18.7.5.9 as follows:

18.7.5.8 – Where the calculated point of contraflexure is not within the middle half of the member clear height, provide transverse reinforcement as specified in ACI

318, Sections 18.7.5.1, Items (a) through (c), over the full height of the member.

18.7.5.9 – At any section where the design strength, ϕP_n , of the column is less than the sum of the shears V_e computed in accordance with ACI 318 Sections 18.7.6.1 and 18.6.5.1 for all the beams framing into the column above the level under consideration, transverse reinforcement as specified in ACI 318 Sections 18.7.5.1 through 18.7.5.3 shall be provided. For beams framing into opposite sides of the column, the moment components may be assumed to be of opposite sign. For the determination of the design strength, ϕP_n , of the column, these moments may be assumed to result from the deformation of the frame in any one principal axis.

SECTION 42. Section 1905.1.10 is hereby added to read as follows:

1905.1.10 ACI 318, Section 18.10.4.

Modify ACI 318, Section 18.10.4, by adding Section 18.10.4.6 as follows:

18.10.4.6 – Walls and portions of walls with $P_u > 0.35P_o$ shall not be considered to contribute to the calculated shear strength of the structure for resisting earthquake-induced forces. Such walls shall conform to the requirements of ACI 318 Section 18.14.

SECTION 43. Section 1905.1.11 is hereby added to read as follows:

1905.1.11 ACI 318, Section 18.12.6.

Modify ACI 318, by adding Section 18.12.6.2 as follows:

18.12.6.2 – Collector and boundary elements in topping slabs placed over precast floor and roof elements shall not be less than 3 inches (76 mm) or $6 d_b$ in thickness, where d_b is the diameter of the largest reinforcement in the topping slab.

SECTION 44. Section 2304.10.1 is hereby amended to read as follows:

2304.10.1 Fastener requirements.

Connections for wood members shall be designed in accordance with the appropriate methodology in Section 2301.2. The number and size of fasteners connecting wood members shall not be less than that set forth in Table 2304.10.1.

Staple fasteners in Table 2304.10.1 shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E, or F.

Exception: Staples may be used to resist or transfer seismic forces when the allowable shear values are substantiated by cyclic testing and approved by the Building Official.

SECTION 45. Table 2304.10.1 is hereby amended to read as follows:

**TABLE 2304.10.1
FASTENING SCHEDULE^d**

...

d. Staples shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E, or F.

SECTION 46. Section 2304.12.5 is hereby amended to read as follows:

2304.12.5 Wood used in retaining walls and cribs.

Wood installed in retaining or crib walls shall be preservative treated in accordance with AWPA U1 for soil and fresh water use. Wood shall not be used in retaining or crib walls for structures assigned to Seismic Design Category D, E, or F.

SECTION 47. Section 2305.4 is hereby added to read as follows:

2305.4 **Quality of nails.**

In Seismic Design Category D, E, or F, mechanically driven nails used in wood structural panel shear walls shall meet the same dimensions as that required for hand-driven nails, including diameter, minimum length, and minimum head diameter. Clipped head or box nails are not permitted in new construction. The allowable design value for clipped head nails in existing construction may be taken at no more than the nail-head-area ratio of that of the same size hand-driven nails.

SECTION 48. Section 2305.5 is hereby added to read as follows:

2305.5 **Hold-down connectors.**

In Seismic Design Category D, E or F, hold-down connectors shall be designed to resist shear wall overturning moments using 75 percent of the allowable seismic load values. Such values shall be established in a valid research report from approved sources ~~in accordance with Section 104.11.1~~ or by accepted engineering practice and the provisions of this Code.

Exception: Values established by specialized cyclic and dynamic testing may be used when approved by the Building Official in accordance with Section ~~104.11.2~~104.2.8.

Connector bolts into wood framing shall require steel plate washers on the post on the opposite side of the anchorage device. Plate size shall be a minimum of 0.229 inch by 3 inches by 3 inches (5.82 mm by 76 mm by 76 mm) in size. Hold-down connectors shall be tightened to finger tight plus one half (1/2) wrench turn just prior to covering the wall framing.

SECTION 49. Section 2306.2 is hereby amended to read as follows:

2306.2 Wood-frame diaphragms.

Wood-frame diaphragms shall be designed and constructed in accordance with AWC SDPWS. Where panels are fastened to framing members with staples, requirements and limitations of AWC SDPWS shall be met and the allowable shear values set forth in Table 2306.2(1) or 2306.2(2) shall only be permitted for structures assigned to Seismic Design Category A, B, or C.

Exception: Allowable shear values where panels are fastened to framing members with staples may be used if such values are substantiated by cyclic testing and approved by the Building Official.

The allowable shear values in Tables 2306.2(1) and 2306.2(2) are permitted to be increased 40 percent for wind design.

Wood structural panel diaphragms used to resist seismic forces in structures assigned to Seismic Design Category D, E or F shall be applied directly to the framing members.

Exception: Wood structural panel diaphragms are permitted to be fastened over solid lumber planking or laminated decking, provided the panel joints and lumber planking or laminated decking joints do not coincide.

SECTION 50. Section 2306.3 is hereby amended to read as follows:

2306.3 Wood-frame shear walls.

Wood-frame shear walls shall be designed and constructed in accordance with AWC SDPWS. For structures assigned to Seismic Design Category D, E, or F,

application of Tables 4.3A and 4.3B of AWC SDPWS shall include the following:

1. Wood structural panel thickness for shear walls shall not be less than 3/8 inch thick and studs shall not be spaced at more than 16 inches on center.

2. The maximum nominal unit shear capacities for 3/8 inch wood structural panels resisting seismic forces in structures assigned to Seismic Design Category D, E or F is 400 pounds per linear foot (plf).

Exception: Other nominal unit shear capacities may be permitted if such values are substantiated by cyclic testing and approved by the building official.

3. Nails shall be placed not less than 1/2 inch in from the panel edges and not less than 3/8 inch from the edge of the connecting members for shear greater than 350 plf using ASD or 500 plf using LRFD. Nails shall be placed not less than 3/8 inch from panel edges and not less than 1/4 inch from the edge of the connecting members for shears of 350 plf or less using ASD or 500 plf or less using LRFD.

4. Table 4.3B application is not allowed for structures assigned to Seismic Design Category D, E, or F.

For structures assigned to Seismic Design Category D, E, or F, application of Table 4.3C of AWC SDPWS shall not be used below the top level in a multi-level building.

Where panels are fastened to framing members with staples, requirements and limitations of AWC SDPWS shall be met and the allowable shear values set forth in Table 2306.3(1), 2306.3(2) or 2306.3(3) shall only be permitted for structures assigned to Seismic Design Category A, B, or C.

Exception: Allowable shear values where panels are fastened to framing

members with staples may be used if such values are substantiated by cyclic testing and approved by the Building Official.

The allowable shear values in Tables 2306.3(1) and 2306.3(2) are permitted to be increased 40 percent for wind design. Panels complying with ANSI/APA PRP-210 shall be permitted to use design values for Plywood Siding in the AWC SDPWS.

Wood structural panel shear walls used to resist seismic forces in structures assigned to Seismic Design Category D, E, or F shall be applied directly to the framing members.

SECTION 51. Section 2307.2 is hereby added to read as follows:

2307.2 Wood-frame panel shear walls.

Wood-frame shear walls shall be designed and constructed in accordance with Section 2306.3 as applicable.

SECTION 52. Section 2308.6.8.1 is hereby amended to read as follows:

2308.6.8.1 Foundation requirements.

...

Exception: For structures with a maximum plan dimension not more than 50 feet (15240 mm), continuous foundations are required at exterior walls only for structures assigned to Seismic Design Category A, B, or C.

For structures in Seismic Design Categories D and E, exterior braced wall panels shall be in the same plane vertically with the foundation or the portion of the structure containing the offset shall be designed in accordance with accepted engineering practice and Section 2308.1.1.

Exceptions:

1. ~~Exterior braced wall panels shall be permitted to be located not more than 4 feet (1219 mm) from the foundation below where supported by a floor constructed in accordance with all of the following:~~

1.1. ~~Cantilevers or setbacks shall not exceed four times the nominal depth of the floor joists.~~

1.2. ~~Floor joists shall be 2 inches by 10 inches (51 mm by 254 mm) or larger and spaced not more than 16 inches (406 mm) on center.~~

1.3. ~~The ratio of the back span to the cantilever shall be not less than 2 to 1.~~

1.4. ~~Floor joists at ends of braced wall panels shall be doubled.~~

1.5. ~~A continuous rim joist shall be connected to the ends of cantilevered joists. The rim joist is permitted to be spliced using a metal tie not less than 0.058 inch (1.47 mm) (16 galvanized gage) and 1 1/2 inches (38 mm) in width fastened with six 16d common nails on each side. The metal tie shall have a yield stress not less than 33,000 psi (227 MPa).~~

1.6. ~~Joists at setbacks or the end of cantilevered joists shall not carry gravity loads from more than a single story having uniform wall and roof loads nor carry the reactions from headers having a span of 8 feet (2438 mm) or more.~~

2. ~~The end of a required braced wall panel shall be allowed to extend not more than 1 foot (305 mm) over an opening in the wall below. This requirement is applicable to braced wall panels offset in plane and braced wall panels offset out of~~

~~plane as permitted by Exception 1. Braced wall panels are permitted to extend over an opening not more than 8 feet (2438 mm) in width where the header is a 4-inch by 12-inch (102 mm by 305 mm) or larger member.~~

SECTION 53. Section 2308.6.5.1 is hereby amended to read as follows:

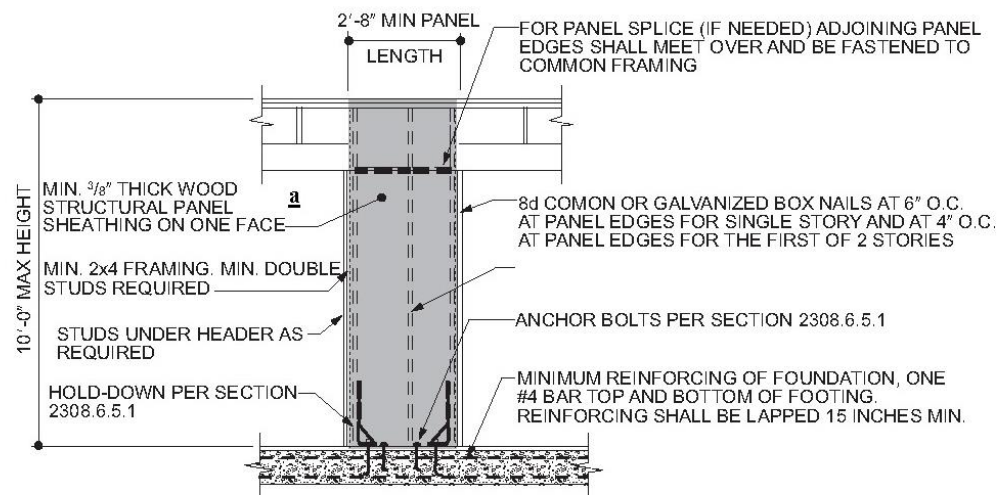
2308.6.5.1 Alternate braced wall (ABW).

An ABW shall be constructed in accordance with this section and Figure 2308.6.5.1. In one-story buildings, each panel shall have a length of not less than 2 feet 8 inches (813 mm) and a height of not more than 10 feet (3048 mm). Each panel shall be sheathed on one face with 3/8-inch (3.2 mm) minimum-thickness wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Table 2304.10.1 and blocked at wood structural panel edges. For structures assigned to Seismic Design Category D or E, each panel shall be sheathed on one face with 15/32-inch minimum-thickness (11.9 mm) wood structural panel sheathing nailed with 8d common nails spaced 3 inches on panel edges, 3 inches at intermediate supports. Two anchor bolts installed in accordance with Section 2308.3.1 shall be provided in each panel. Anchor bolts shall be placed at each panel outside quarter points. Each panel end stud shall have a hold-down device fastened to the foundation, capable of providing an approved uplift capacity of not less than 1,800 pounds (8006 N). The hold-down device shall be installed in accordance with the manufacturer's recommendations. The ABW shall be supported directly on a foundation or on floor framing supported directly on a foundation that is continuous across the entire length of the braced wall line. This foundation shall be reinforced with not less than one No. 4 bar top and bottom. Where

the continuous foundation is required to have a depth greater than 12 inches (305 mm), a minimum 12-inch by 12-inch (305 mm by 305 mm) continuous footing or turned-down slab edge is permitted at door openings in the braced wall line. This continuous footing or turned-down slab edge shall be reinforced with not less than one No. 4 bar top and bottom. This reinforcement shall be lapped 45²⁴ inches (384⁶¹⁰ mm) with the reinforcement required in the continuous foundation located directly under the braced wall line.

...

SECTION 54. Figure 2308.6.5.1 is hereby amended to read as follows:



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

a. For structures assigned to Seismic Design Category D or E, sheathed on one face with 15/32-inch-minimum-thickness (11.9 mm) wood structural panel sheathing.

**FIGURE 2308.6.5.1
ALTERNATE BRACED WALL PANEL (ABW)**

SECTION 55. Section 2308.6.5.2 is hereby amended to read as follows:

2308.6.5.2 Portal frame with hold-downs (PFH).

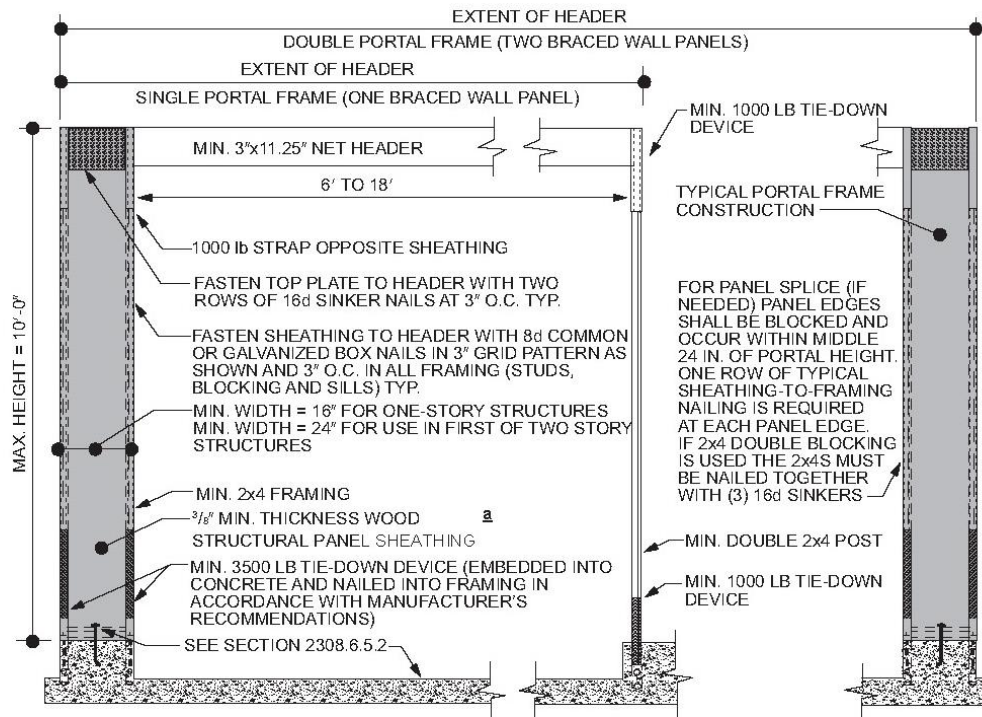
A PFH shall be constructed in accordance with this section and Figure 2308.6.5.2. The adjacent door or window opening shall have a full-length header.

In one-story buildings, each panel shall have a length of not less than 16 inches (406 mm) and a height of not more than 10 feet (3048 mm). Each panel shall be sheathed on one face with a single layer of 3/8-inch (9.5 mm) minimum-thickness wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Figure 2308.6.5.2. For structures assigned to Seismic Design Category D or E, each panel shall be sheathed on one face with 15/32-inch minimum-thickness (11.9 mm) wood structural panel sheathing nailed with 8d common nails spaced 3 inches on panel edges, 3 inches at intermediate supports and in accordance with Figure 2308.6.5.2. The wood structural panel sheathing shall extend up over the solid sawn or glued-laminated header and shall be nailed in accordance with Figure 2308.6.5.2. A built-up header consisting of at least two 2-inch by 12-inch (51 mm by 305 mm) boards, fastened in accordance with Item 24 of Table 2304.10.1 shall be permitted to be used. A spacer, if used, shall be placed on the side of the built-up beam opposite the wood structural panel sheathing. The header shall extend between the inside faces of the first full-length outer studs of each panel. The clear span of the header between the inner studs of each panel shall be not less than 6 feet (1829 mm) and not more than 18 feet (5486 mm) in length. A strap with an uplift capacity of not less than 1,000 pounds (4,400 N) shall fasten the header to the inner studs opposite the sheathing. One anchor bolt not less than 5/8 inch (15.9 mm) diameter and installed in accordance with Section 2308.3.1 shall be provided in the center of each sill plate. The studs at each end of the panel shall have a hold-down device fastened to the foundation with an uplift capacity of not less than 3,500 pounds (15 570 N).

Where a panel is located on one side of the opening, the header shall extend between the inside face of the first full-length stud of the panel and the bearing studs at the other end of the opening. A strap with an uplift capacity of not less than 1,000 pounds (4400 N) shall fasten the header to the bearing studs. The bearing studs shall also have a hold-down device fastened to the foundation with an uplift capacity of not less than 1,000 pounds (4400 N). The hold-down devices shall be an embedded strap type, installed in accordance with the manufacturer's recommendations. The PFH panels shall be supported directly on a foundation that is continuous across the entire length of the braced wall line. This foundation shall be reinforced with not less than one No. 4 bar top and bottom. Where the continuous foundation is required to have a depth greater than 12 inches (305 mm), a minimum 12-inch by 12-inch (305 mm by 305 mm) continuous footing or turned-down slab edge is permitted at door openings in the braced wall line. This continuous footing or turned-down slab edge shall be reinforced with not less than one No. 4 bar top and bottom. This reinforcement shall be lapped not less than ~~45~~24 inches (~~384~~610 mm) with the reinforcement required in the continuous foundation located directly under the braced wall line.

...

SECTION 56. Figure 2308.6.5.2 is hereby amended to read as follows:









For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound = 4.448 N.

a. For structures assigned to Seismic Design Category D or E, sheathed on one face with 15/32-inch-minimum-thickness (11.9 mm) wood structural panel sheathing.

FIGURE 2308.6.5.2
PORTAL FRAME WITH HOLD-DOWNS (PFH)

SECTION 57. Table 2308.6.1 is hereby amended to read as follows:

TABLE 2308.6.1^a
WALL BRACING REQUIREMENTS

SEISMIC DESIGN CATEGORY	STORY CONDITION (SEE SECTION 2308.2)	MAXIMUM SPACING OF BRACED WALL LINES	BRACED PANEL LOCATION, SPACING (O.C.) AND MINIMUM PERCENTAGE (X)			MAXIMUM DISTANCE OF BRACED WALL PANELS FROM EACH END OF BRACED WALL LINE
			Bracing method ^b			
			LIB	DWB, WSP	SFB, PBS, PCP, HPS, GB ^{c,d}	
A and B		35'- 0"	Each end and ≤ 25'- 0" o.c.	Each end and ≤ 25'- 0" o.c.	Each end and ≤ 25'- 0" o.c.	12'- 6"
		35'- 0"	Each end and ≤ 25'- 0" o.c.	Each end and ≤ 25'- 0" o.c.	Each end and ≤ 25'- 0" o.c.	12'- 6"
		35'- 0"	NP	Each end and ≤ 25'- 0" o.c.	Each end and ≤ 25'- 0" o.c.	12'- 6"
C		35'- 0"	NP	Each end and ≤ 25'- 0" o.c.	Each end and ≤ 25'- 0" o.c.	12'- 6"
		35'- 0"	NP	Each end and ≤ 25'- 0" o.c. (minimum 25% of wall length) ^e	Each end and ≤ 25'- 0" o.c. (minimum 25% of wall length) ^e	12'- 6"
D and E <u>f, g, h</u>		25'- 0"	NP	$S_{DS} < 0.50$: Each end and ≤ 25'- 0" o.c. (minimum 21% of wall length) ^e	$S_{DS} < 0.50$: Each end and ≤ 25'- 0" o.c. (minimum 43% of wall length) ^e	8'- 0"
				$0.5 \leq S_{DS} < 0.75$: Each end and ≤ 25'- 0" o.c. (minimum 32% of wall length) ^e	$0.5 \leq S_{DS} < 0.75$: Each end and ≤ 25'- 0" o.c. (minimum 59% of wall length) ^e	
				$0.75 \leq S_{DS} \leq 1.00$: Each end and ≤ 25'- 0" o.c. (minimum 37% of wall length) ^e	$0.75 \leq S_{DS} \leq 1.00$: Each end and ≤ 25'- 0" o.c. (minimum 75% of wall length)	
				$S_{DS} > 1.00$: Each end and ≤ 25'- 0" o.c. (minimum 48% of wall length) ^e	$S_{DS} > 1.00$: Each end and ≤ 25'- 0" o.c. (minimum 100% of wall length) ^e	

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

NP = Not Permitted.

a. This table specifies minimum requirements for braced wall panels along interior or exterior braced wall lines.

b. See Section 2308.6.3 for full description of bracing methods.

c. For Method GB, gypsum wallboard applied to framing supports that are spaced at 16 inches on center.

d. The required lengths shall be doubled for gypsum board applied to only one face of a braced wall panel.

e. Percentage shown represents the minimum amount of bracing required along the building length (or wall length if the structure has an irregular shape).

f. DWB, SFB, PBS, and HPS wall braces are not permitted in Seismic Design Categories D or E.

g. Minimum length of panel bracing of one face of the wall for WSP sheathing shall be at least 4'-0" long or both faces of the wall for GB or PCP sheathing shall be at least 8'-0" long; h/w ratio shall not exceed 2:1. Wall framing to which sheathing used for bracing is applied shall be nominal 2 inch wide (actual 1 1/2 inch (38 mm) or larger members and spaced a maximum of 16 inches on center. Braced wall panel construction types shall not be mixed within a braced wall line.

h. WSP sheathing shall be a minimum of 15/32" thick nailed with 8d common placed 3/8 inches from panel edges and spaced not more than 6 inches on center and 12 inches on center along intermediate framing members.

SECTION 58. Section 2308.6.9 is hereby amended to read as follows:

2308.6.9 Attachment of sheathing.

Fastening of braced wall panel sheathing shall not be less than that prescribed in Tables 2308.6.1 or 2304.10.1. Wall sheathing shall not be attached to framing members by adhesives. Staple fasteners in Table 2304.10.1 shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E, or F.

Exception: Staples may be used to resist or transfer seismic forces when the allowable shear values are substantiated by cyclic testing and approved by the Building Official.

All braced wall panels shall extend to the roof sheathing and shall be attached to parallel roof rafters or blocking above with framing clips (18 gauge minimum) spaced at maximum 24 inches (6096 mm) on center with four 8d nails per leg (total eight 8d nails per clip). Braced wall panels shall be laterally braced at each top corner and at maximum 24 inch (6096 mm) intervals along the top plate of discontinuous vertical framing.

SECTION 59. Section 6501 is hereby amended to read as follows:

SECTION 6501 DEFINITIONS

...

FACE OF BUILDING. The general outer surface, not including cornices, bay windows or other ornamental trim, of any main exterior wall of a building.

...

SECTION 60. Section 6502 is hereby amended to read as follows:

6502.1

Scope. This Chapter is intended to regulate the construction, erection, alteration, repair and maintenance of all signs, and their supports in the unincorporated territory of the County of Los Angeles, except ground signs extending not more than 6 feet (1829 mm) above grade. Signs required by Chapter 10, 11A, or 11B are exempt from the requirements of this Chapter. Plastic signs for open mall shall comply with Section 402.6.4 and this Chapter, whichever is more restrictive. Sign requirements other than those described above in this Code shall comply with those requirements and this Chapter, whichever is more restrictive.

...

SECTION 61. Section 6502.5 is hereby amended to read as follows:

6502.5 Projection and clearance. Signs extending beyond the exterior wall of the building shall comply with Section 705.2 and the following requirements.

Signs may project over a public street, public sidewalk or building line in accordance with Section 3202 and a distance as determined by the clearance of the bottoms thereof above the level of the sidewalk or grade immediately below, whichever is more restrictive, as follows:

Clearance less than 8 feet (2438 mm), ~~6-inch (152 mm) projection;~~ shall be prohibited. ~~in accordance with Section 3202.2~~

Clearance from 8 feet (2438 mm) to 10 feet (3048 mm), ~~1-foot (305 mm) projection;~~

Clearance ~~And above~~ 8 feet (2438 mm) and above, a 1 foot projection is

permitted and for each additional 2-foot clearance (610 mm), an additional 1-foot (305 mm) projection is permitted;

Provided that no structure shall have a projection of more than 5 feet (1524 mm), and provided further that a projecting sign built above and in connection with a marquee may have such a projection of 5 feet (1524 mm) without clearance between sign and marquee; and provided further that no structure shall project beyond the curb line, regardless of clearance above grade.

Signs projecting more than 6 inches (152 mm) from the face of a building over private property used or intended to be used by the general public shall have a minimum clearance of 8 feet (2438 mm) above said sidewalk or grade.

SECTION 62. Section 6502.6 is hereby amended to read as follows:

6502.6 Materials. Signs and their supports may be constructed of any material allowed in this Code, unless otherwise specified in this Chapter for the classification and location of sign to be erected.

Glass used in signs shall be of the size, thickness and type given in Table 65-1 of this Chapter and shall comply with the requirements of Chapter 24.

Exceptions:

- ~~1. Surfaces of signs not more than 55 feet (16764 mm) above grade may be of approved plastic material which has a flame spread rating of 25 or less when tested in accordance with Standard 8-1, of the Uniform Building Code, 1997 Edition, as published by the International Conference of Building Officials, in the way intended for use.~~

2. Notwithstanding any other provisions of this Code, plastics which burn at a rate no faster than 2.5 inches per minute (64 mm/s) when tested in accordance with ASTM D 635 shall be deemed approved plastics and ~~may can~~ be used as the display surface material and for the letters, decorations and facing on signs and outdoor display structures.

The following signs shall comply as noted and with this Chapter, whichever is more restrictive:

1. Warning signs regarding hazardous materials shall comply with Section 415.
2. Address identification signs shall comply with Section 501.2.
3. Fire Protection System signs shall comply with Chapter 9.
4. Light-transmitting plastic interior signs shall comply with Section 2611.
5. Public toilet facility signs shall comply with Chapter 11A or 11B.
6. Signage for elevators shall comply with Chapter 30 and Chapter 11A or 11B, when applicable.

SECTION 63. Section 6502.7 is hereby amended to read as follows:

6502.7 Prohibited locations. Signs and their supports shall not be erected, constructed or maintained so as to obstruct any fire escape or any window or door or opening used as part of the means of egress or as part of the accessible route, except as permitted by Chapters 10, 11A and 11B.

SECTION 64. Section 6504 is hereby amended to read as follows:

SECTION 6504 PROJECTING SIGNS

Projecting signs attached to a building shall be constructed of noncombustible materials, or of any material complying with Sections 705.2.1 through 705.2.3. The thickness of any such sign shall not exceed the following:

...

SECTION 65. Section 6506.1 is hereby amended to read as follows:

6506.1 Access. Passages clear of all obstructions shall be left under all signs exceeding a height of 4 feet (1219 mm) above the roof thereunder or immediately adjacent thereto. There shall be one such passage or access opening for each building covered and at least every 50 feet (15 240 mm) in the length of the sign, and when such signs are at right angles to the a face of ~~the~~ building, within 20 feet (6096 mm) of parapet or exterior walls. Such passages shall not be less than 3 feet (914 mm) wide and 4 feet (1219 mm) high and shall be at the parapet or roof level.

...

SECTION 66. Section 6507.1 is hereby amended to read as follows:

6507.1 Marquee signs. Signs may be placed on, attached to or constructed on a marquee that meet the requirements for a marquee constructed in accordance with ~~as described in~~ Sections 3106 and 3202. The marquee sign:

1. Shall not project beyond the perimeter of the marquee,
2. Shall not extend more than 6 feet above a marquee,
3. Shall not extend more than 1 foot below a marquee, and
4. Shall not have a vertical dimension greater than 8 feet.

SECTION 67. Section 6507.2 is hereby amended to read as follows:

6507.2 Cloth and banner signs. Cloth and banner signs placed on buildings shall be ~~strongly~~ constructed and securely attached flat against the building. They shall be removed as soon as torn or damaged.

SECTION 68. Section 6601.1 is hereby amended to read as follows:

6601.1 Structures regulated. The provisions of this Chapter are intended to regulate structures not otherwise regulated by this or other Codes, which affect or may affect the public ~~physical safety of human beings~~, and shall include the installation, maintenance and operations of public assembly tents, amusement devices, towers, membrane or temporary structures not regulated by Chapter 31, and other structures.

...

SECTION 69. Section 6601.3 is hereby amended to read as follows:

6601.3 Construction requirements. Amusement devices, and all other structures, equipment or devices regulated by this chapter, whether specifically mentioned or not, shall be made structurally safe, with due allowance for impact, wear and injury during use.

...

SECTION 70. Section 6602.1 is hereby amended to read as follows:

6602.1 General. Amusement devices or structures shall be regulated by this section. Amusement devices or structures located within special amusement buildings must also comply with the requirements of Sections 411 and

903.2.11.6.

SECTION 71. Section 6604 is hereby amended to read as follows:

6604.1 **General.** Rebound tumbling center, as used in this Chapter, is a place where rebound tumbling equipment is provided and maintained for public use and shall comply with Sections 6604.1 through 6604.6.

~~SECTION 6605~~ — ~~LAYOUT OF REBOUND TUMBLING EQUIPMENT~~

6604.2 **Layout of Rebound Tumbling Equipment.** Rebound tumbling equipment shall be located on a level surface in such a way as to be within view of the operator or attendant at all times.

The spacing of equipment units shall conform to the following minimum dimensions as measured from the inside edge of the frame:

1. Three feet (914 mm) between sides of units.
2. Four feet (1219 mm) between ends of units.
3. Five feet (1524 mm) from ends to nearest fence, building or other similar construction.
4. Three feet (914 mm) from sides or corners to nearest fence, building or other similar construction.

The area surrounding the rebound tumbling equipment shall be surfaced to prevent a dust nuisance and have a reasonably level surface of pea gravel or equivalent type of material from a safety and dust-control standpoint.

~~SECTION 6606~~ — ~~CONSTRUCTION OF PITS~~

6604.3 **Construction of Pits.** Pits for rebound tumbling centers

shall be so constructed that they will not interfere with the operation of the equipment and be of a depth not less than 3 feet (914 mm) nor more than 4 feet (1219 mm) at centers.

Such pits shall be so framed that the rebound tumbling equipment is held in a level position and is supported on a solid stable surface. Lumber used as framing for pits shall not be less than 2 inches (51 mm) in thickness and shall be securely connected together.

~~SECTION 6607~~ — ~~CONSTRUCTION OF EQUIPMENT~~

6604.4 **Construction of Equipment.** Precautionary measures shall be taken to prevent broken springs on rebound tumbling equipment disengaging from the assembly.

~~SECTION 6608~~ — ~~USE OF PADDING~~

6604.5 **Use of Padding.** The frames of rebound tumbling equipment shall be completely padded to provide reasonable safety. Pads 2 inches (51 mm) thick filled with cotton liners shall be deemed to meet this requirement.

~~SECTION 6609~~ — ~~FENCING~~

6604.6 **Fencing.** The entire rebound tumbling center shall be completely enclosed by fencing not less than 5 feet (1524 mm) in height.

~~SECTION 6610~~ — ~~INSPECTION~~

6604.7 **Inspection.** The building official shall inspect annually every rebound tumbling center.

SECTION 72. Section 6611 is hereby amended to read as follows:

SECTION ~~6644~~6605 AUTOMOBILE RACING FACILITIES

664405.1 Scope. Every person or corporation owning or operating oval and other closed track automobile racing facilities shall erect and maintain protective fencing between grandstands or bleacher areas in accordance with Section 664405.2. This section shall not apply where racing is limited to quarter midget cars, go-carts and similar smaller vehicles.

664405.2.1 Location. Fencing shall be installed between the grandstands or bleachers and the track surface in the following situations:

...

664405.2.2 Height. Fencing shall extend 12 feet (3658 mm) above the highest grade of the racing surface.

664405.2.3 Construction.

...

664405.3 Curves.

...

SECTION 73. Section 6709.2 is hereby amended to read as follows:

6709.2 Single swinging door, pair of doors, and Dutch doors. A single swinging door, the active leaf of a pair of doors, and the bottom leaf of Dutch doors shall be equipped with a deadbolt and a latch. If a key-locking feature is incorporated in the latching mechanism, a dead latch shall be used. The deadbolt and latch may be activated by one lock or by individual locks. Deadbolts shall contain hardened inserts, or equivalent, so as to repel cutting tool attack. The deadbolt lock or

locks shall be key operated from the exterior side of the door and engaged or disengaged from the interior side of the door by a device not requiring a key, tool or excessive force.

Exceptions:

1. The latch may be omitted from doors in Group B Occupancies.
2. In other than residential occupancies, locks may be key-operated, or otherwise operated from the inside when not prohibited by Chapter 10 or other laws and regulations.
3. A swinging door of width greater than 5 feet (1524 mm) may be secured as set forth in Section 6711.
4. In residential occupancies, other than means of egress doors complying with Section 1010 and emergency escape and rescue doors complying with Section 1030 ~~not required by Section 1029 or 1008~~ may be equipped with security-type hardware which requires a key to release from the interior side of the door if the sleeping rooms are protected with a fire-warning system as set forth in Sections 907.2.11 and an automatic sprinkler system as required by Section 903.2.8.

...

SECTION 74. Section 6710 is hereby amended to read as follows:

SECTION 6710 DOORS: SLIDING GLASS DOORS

Sliding glass doors shall be equipped with locking devices and shall be so

installed that, when subjected to tests specified in Section 6706, they remain intact and engaged. Movable panels shall not be rendered easily openable or removable from the frame during or after the tests.

Cylinder guards shall be installed on all mortise or rim-type cylinder locks installed in hollow-metal doors whenever the cylinder projects beyond the face of the door or is otherwise accessible to gripping tools.

Locking devices installed on sliding glass doors complying with Sections 1010 and 1030 ~~providing the exit required by Section 1003 or providing for the emergency escape or rescue required by Section 1029~~ shall be releasable from the inside without the use of a key, tool or excessive force.

SECTION 75. Section 6715.1 is hereby amended to read as follows:

6715.1 Emergency egress windows. Locking devices installed on windows providing the emergency egress required by Section 1030 ~~1029~~ shall be releasable from the inside without use of a key, tool or excessive force.

SECTION 76. Section 6802 is hereby amended to read as follows:

...

Kilowatt Thermal. Unit of measurement to approximate of the amount of energy produced by a solar thermal collector. Each square meter of collector space equals 0.7 kilowatts thermal. This factor shall be used uniformly for unglazed collectors, flat plate collectors and evacuated tubular collectors.

...

SECTION 77. Section 6804 is hereby amended to read as follows:

SECTION 6804 PERMITS

Upon approval of a permit application by the Building Official, a building, electrical or plumbing permit, as applicable, will be issued for the work describes in the application. A combined solar energy permit may be issued for photovoltaic systems, which will include all building and electrical work for a photovoltaic system installation. The combined solar energy permit is subject to the requirements of this Code and the Electrical Code.

SECTION 78. Section 6805 is hereby amended to read as follows:

SECTION 6805 FEES

Permits fees for the installation of small residential rooftop solar energy systems shall be charged according to the applicable fees prescribed in Section 107 of this code, Section 82-8 of the Electrical Code, and Sections 103.10 and 103.11 of the Plumbing Code, as applicable. The combined solar energy permit fee for small residential rooftop photovoltaic systems shall not exceed \$500 unless modified by or in accordance with Government Code Section 66015 or other applicable law.

...

SECTION 79. Section 9403 is hereby amended to read as follows:

SECTION 9403 DEFINITIONS

For the purposes of this Chapter, the applicable definitions identified in Chapter 16 of this Code and the following definition shall apply:

...

SECTION 80. Section 9502 is hereby amended to read as follows:

SECTION 9502 SCOPE

The provisions of this Chapter shall apply to all tilt-up concrete wall buildings with flexible diaphragms constructed, under construction, or for which a building permit was issued prior to April 13, 1975, ~~and which on the effective date of this ordinance have concrete tilt-up bearing walls as defined herein.~~

...

SECTION 81. Section 9503 is hereby amended to read as follows:

SECTION 9503 DEFINITIONS

For purposes of this Chapter, the applicable definitions contained in ~~Chapter 16~~ of this Code and the following definitions shall apply:-

...

FLEXIBLE DIAPHRAGMS is defined as roofs and floors such as those sheathed with plywood, wood decking (1-by or 2-by) or metal decks without concrete topping slabs.

SECTION 82. Section 9505 is hereby amended to read as follows:

9505.1 General. The owner of each building within the scope of this Chapter shall, upon service of an Earthquake Hazard Reduction Compliance Order, cause a structural analysis of the building to be made by a civil or structural engineer or architect licensed by the State of California to conduct structural analysis and shall submit such analysis to the Department of Public Works for review. The structural analysis shall state whether or not the building meets the requirements of this Chapter. If such a structural analysis indicates that the building does not meet the requirements of this

Chapter, then the owner shall either obtain a demolition permit and demolish the building or submit plans for structural alterations of the building so that it will comply with the provisions of this Chapter together with a structural analysis so indicating, and perform the work.

The owner shall submit the required structural analysis, obtain any necessary permits and commence and complete the required alteration or demolition within the time limits set forth in Table 95-A. These time limits shall run from the date the Earthquake Hazard Reduction Compliance Order is served.

Once an Earthquake Hazard Reduction Compliance Order has been served, buildings within the scope of this Chapter may not be structurally altered, remodeled or added to without first complying with the provisions of this Chapter unless the Building Official determines that the alteration is minor in nature.

9505.2 Alteration and repairs. Alterations and repairs required to meet the provisions of this Chapter shall comply with applicable structural requirements of the building code unless specifically modified in this Chapter.

9505.3 Requirements for plans. The plans shall accurately reflect the results of the engineering investigation and design and shall show all pertinent dimensions and sizes for plan review and construction. The following shall be provided:

1. Floor plans and roof plans shall show existing framing construction, diaphragm construction, proposed wall anchors, cross-ties and collectors. Existing nailing, anchors, cross-ties and collectors shall also be shown on the plans if they are considered part of the lateral force-resisting systems.

2. At elevations where there are alterations or damage, details shall show roof and floor heights, dimensions of openings, location and extent of existing alteration or damage and proposed repair.

3. Typical wall panel details and sections with panel thickness, height, pilasters and location of anchors shall be provided.

4. Details shall include existing and new anchors and the method of developing anchor forces into the diaphragm framing, existing and/or new cross-ties, and existing and/or new or improved support of roof and floor girders at pilasters or walls.

5. The basis for design and the applicable Building Code used for the design shall be stated on the plans.

6. Plans submitted pursuant to the provisions of this Chapter shall be signed by the licensed civil or structural engineer or architect responsible for the seismic analysis of the building and shall comply with the requirements of this Code and this Section.

9505.4 Structural observation, testing, inspection. Structural observation, in accordance with Section 1709 of the Building Code, shall be required for all structures in which seismic retrofit is being performed in accordance with this Chapter. Structural observation shall include visual observation of work for conformance to the approved construction documents and confirmation of existing conditions assumed during design.

Structural testing and inspection for new construction materials shall be in accordance with the Building Code, except as modified by this Chapter.

SECTION 83. Section 9506 is hereby amended to read as follows:

SECTION 9506 ANALYSIS AND DESIGN

9506.1 Wall Panel Anchorage. ~~Concrete walls shall be anchored to all floors and roofs which provide lateral support for the wall. The anchorage shall provide a positive direct connection between the wall and floor or roof construction capable of resisting a horizontal force equal to 45 percent of the tributary wall weight for essential facilities, and 30 percent of the tributary wall weight for all other buildings, or a minimum force of 250 pounds per linear foot (3.65 kN/m) of wall, whichever is greater. The required anchorage shall be based on the tributary wall panel assuming simple supports at floors and roof.~~ **General.** The analysis and design shall be in accordance with Chapter A2, Section A206 of Appendix A of the Existing Building Code.

9506.2 Special Requirements for Wall Anchors and Continuity Ties. ~~The steel elements of the wall anchorage systems and continuity ties shall be designed by the allowable stress design method using a load factor of 1.7. The one-third stress increase permitted by Section 1605.3.2 shall not be permitted for materials using allowable stress design methods.~~

~~The strength design specified in Section 1909, using a load factor of 2.0 in lieu of 1.4 for earthquake loading, shall be used for design of embedments in concrete.~~

~~Wall anchors shall be provided to resist out-of-plane forces, independent of existing shear anchors.~~

Exception: ~~Existing cast-in-place shear anchors may be used as wall anchors if the tie element can be readily attached to the anchors and if the engineer or architect~~

~~can establish tension values for the existing anchors through the use of approved as-built plans or testing, and thorough analysis showing that the bolts are capable of resisting the total shear load while being acted upon by the maximum tension force due to earthquake. Criteria for analysis and testing shall be determined by the Building Official.~~

~~Expansion anchors are not allowed without specific approval of the Building Official. Attaching the edge of steel decks or plywood sheathing to steel ledgers does not comply with the positive anchoring requirements of the Code.~~

~~**9506.3 Development of Anchor Loads into the Diaphragm.** Development of anchor loads into roof and floor diaphragms shall comply with Section 9506.10 of this Code.~~

~~**Exception:** If continuously tied girders are present, then the maximum allowable spacing between the continuity ties is 36 feet (10 973 mm).~~

~~In wood diaphragms, anchorage shall not be accomplished by use of toenails or nails subject to withdrawal, nor shall wood ledgers, top plates or framing be used in cross-grain bending or cross-grain tension. The continuous ties required by Section 9506.10 shall be in addition to the diaphragm sheathing.~~

~~Lengths of development of anchor loads in wood diaphragms shall be based on existing field nailing of the sheathing unless existing edge nailing is positively identified on the original construction plans or at the site.~~

~~At re-entrant corners, continuity collectors may be required for existing return walls not designed as shear walls, to develop into the diaphragm a force equal to the~~

~~lesser of the rocking or shear capacity of the return wall, or the tributary shear, but not exceeding the capacity of the diaphragm. Shear anchors for the return wall shall be commensurate with the collector force. If a truss or beam other than rafters or purlins is supported by the return wall or by a column integral with the return wall, then an independent secondary column is required to support the roof or floor members.~~

~~Seismic design of return walls and fins/canopies at entrances shall ensure deflection compatibility with the diaphragm by either seismically isolating the element or attaching the element and integrating its load into the diaphragm.~~

~~**9506.4 Anchorage at Pilasters.** Anchorage of pilasters shall be designed for the tributary wall anchoring load per Section 9506.1 of this Code, considering the wall as a two-way slab. The pilasters or the walls immediately adjacent to the pilasters shall be anchored directly to the roof framing such that the existing vertical anchor bolts at the top of the pilasters are by-passed without causing tension or shear failure at the top of the pilasters.~~

~~**Exception:** If existing vertical anchor bolts at the top of the pilasters are used for the anchorage, then additional exterior confinement shall be provided.~~

~~The minimum anchorage at a floor or roof between the pilasters shall be that specified in Section 9506.1 of this Code.~~

~~**9506.5 Evaluation of Existing Structural Conditions.** If the structural analysis submitted pursuant to Section 9505 indicates that the building does not meet the requirements of this Chapter, then the engineer or architect shall include in said analysis a report of any observed structural conditions, including, but not limited to,~~

cracks, structural damage or alterations, that may have a substantial effect on the seismic integrity of the building and shall include provisions for the repair of these conditions in the plans submitted to the department for review and approval.

9506.6 Miscellaneous. Existing mezzanines relying on the tilt-up walls for vertical and/or lateral support shall be anchored to the walls for the tributary mezzanine load. Walls depending on the mezzanine for lateral support shall be anchored per Sections 9506.1, 9506.2 and 9506.3.

Exception: Existing mezzanines that have independent lateral and vertical support need not be anchored to the walls.

Existing interior masonry or concrete walls, not designed as shear walls, which extend to the floor above or to the roof diaphragm shall also be anchored for out-of-plane forces per Sections 9506.1, 9506.2 and 9506.3 of this Code. In the in-plane direction, the walls shall be isolated or developed into the diaphragm to resist a lateral force equal to the lesser of the rocking or shear capacity of the wall, or the tributary shear, but in no event to exceed the diaphragm capacity.

9506.7 Symmetry. Symmetry of anchorage systems is required. Non-symmetrical anchorage systems may be allowed when it can be shown that all components of forces are positively resisted as determined by calculations or tests.

9506.8 Minimum Roof Member Size. Wood members used to develop anchorage forces to the diaphragm shall not be less than 3-inch (76mm) nominal thickness when damaged members are replaced. All such members must be checked

~~for earthquake loads as part of the wall anchorage system in addition to dead and live loads. For existing buildings, the member check shall be without the one-third stress increase per Section 1605.3.2.~~

~~**9506.9 Combination of Anchor Types.** The maximum allowable combined load resisted by a combination of different types of anchors that exhibit different behavior or stiffness is not the sum of the allowable load for each anchor. The combined capacity of the new and existing connectors shall be taken as the allowable load of the stiffest anchor.~~

~~**Exception:** Existing anchors may be combined with new anchors for retrofit projects where existing anchors are undamaged and will resist loads equally with a new anchor of identical manufacture, type and installation. The combined allowable load shall be twice the allowable load of a single anchor.~~

~~**9506.10 Diaphragms.** Diaphragms supporting concrete walls shall have continuous ties or struts between diaphragm chords to distribute the anchorage forces specified in Section 12.11 of ASCE 7-10. The spacing of continuous ties shall not exceed 25 feet (7620 mm). Added chords or subdiaphragms may be used to form subdiaphragms to transmit the anchorage forces to the main continuous crossties. The maximum diaphragm shear used to determine the depth of the subdiaphragms shall not exceed 300 pounds per foot (4.38 kN/m). The maximum length-to-width ratio of the wood structural subdiaphragm shall be 2 ½:1.~~

SECTION 84. Section 9507 is hereby amended to read as follows:

SECTION 9507 MATERIALS OF CONSTRUCTION

All materials permitted by this Code, including their appropriate strength or allowable stresses, may be ~~utilized~~used to meet the requirements of this Chapter.

SECTION 85. Section 9508 is hereby deleted in its entirety.

~~SECTION 9508~~ — PLANS

~~9508.1 General.~~ ~~Plans submitted pursuant to the provisions of this Chapter shall be signed by the licensed civil or structural engineer or architect responsible for the seismic analysis of the building and shall comply with the requirements of this Code and this Section.~~

~~9508.2 Plans and Specifications.~~ ~~Plans, engineering calculations, diagrams and other data shall be submitted in two or more sets with each application for a building permit.~~

~~9508.3 Information on Plans and Specifications.~~ ~~Plans and specifications shall be drawn to scale upon substantial medium and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that the proposed work will conform to the provisions of this Chapter and all relevant Codes, laws, ordinances, rules and regulations.~~

~~9508.4 Existing Construction.~~ ~~The following information shall be made part of the approved plans:~~

1. ~~The type and dimensions of existing walls and the size and spacing of existing floor and roof members.~~

2. ~~The extent and type of existing wall anchorage of floors and roof~~

members.

3. ~~Accurately dimensioned plans and/or elevations of existing floors and concrete walls showing dimensioned openings, piers, wall thicknesses and heights.~~

4. ~~The location and extent of any structural conditions as specified in Section 9506.5.~~

SECTION 86. Section 9608.3 is hereby amended to read as follows:

9608.3 Existing Construction.

...

3. The extent and type of parapet corrections which were performed in accordance with Section 302.6 of Title 33 Existing Building Code Chapter 34 of this Code.

...

SECTION 87. Section 9609 is hereby amended to read as follows:

SECTION 9609 INTERPRETATION OF THIS CHAPTER

Removal and replacement of unreinforced masonry interior or exterior walls with materials and construction conforming to the requirements of this Code for new buildings constitutes compliance with this Chapter. Upon completion of such work, the remainder of the structure is, therefore, subject to the provisions of Title 33 Existing Building Code Chapter 34, "Existing Structures." Nothing in this Section shall be construed to mean that a building within the scope of this Chapter is not subject to Section 102, "Unsafe Buildings," or to Chapter 99 of this Code.

...

SECTION 88. Section 9811 is hereby amended to read as follows:

SECTION 9811 COUNTY DEPARTMENTS

9811.1 Internal ~~s~~Services ~~d~~Department.

...

9811.2 Road ~~m~~Maintenance ~~d~~Division.

...

SECTION 89. Section 9814 is hereby amended to read as follows:

SECTION 9814 EMERGENCY PROCEDURES

...

The provisions of this Chapter providing for hearings shall apply to any person having any right, title, or interest in any building secured pursuant to this Section. Such person may request a hearing as to the necessity and reasonable cost of the work performed pursuant to Section 9814 within 10 days after the building, structure or Special Hazard is removed, secured, closed, covered, fenced, backfilled, or provided with some equivalent protection ~~secured~~ or within 10 days after ~~receiving notice~~ being notified of such work by the Building Official.

SECTION 90. Section 9902 is hereby amended to read as follows:

SECTION 9902 DEFINITIONS

...

9902.1 ABATEMENT is the lessening, remediation, removal, termination or reduction of substandard buildings, substandard structures and substandard property which create a public nuisance.

9902.2 ~~9902.1~~ **BOARD** is the Building Rehabilitation Appeals Board as set forth in Section 9906.

~~9902.2 BUILDING~~ is any structure.

...

SECTION 91. Section 9904 is hereby amended to read as follows:

SECTION 9904 SUBSTANDARD CONDITIONS

...

9904.12 **Unpainted Buildings.** All building or portions thereof where the lack of paint is causing dry rot, warping and termite infestation.

9904.13 **Broken Windows and Doors.** All building or portions thereof where broken windows or doors constitute hazardous conditions inviting trespassers and malicious mischief.

SECTION 92. Section 9905 is hereby amended to read as follows:

SECTION 9905 SUBSTANDARD PROPERTY

Any one or more of the following conditions shall constitute substandard property.

9905.1 **~~Substandard buildings.~~** Reserved

9905.2 **~~Unpainted buildings causing dry rot, warping and termite infestation.~~** Reserved

9905.3 **~~Broken windows constituting hazardous conditions and inviting trespassers and malicious mischief.~~** Reserved

...

SECTION 93. Section 9906 is hereby amended to read as follows:

SECTION 9906 BUILDING REHABILITATION APPEALS BOARD

~~In order to hear appeals provided for in Chapter 98 and in this Chapter, there shall be and is hereby created a Building Rehabilitation Appeals Board consisting of five members who are qualified to pass on matters pertaining to substandard buildings and property. The members of the Board shall be appointed by and hold office at the pleasure of the Board of Supervisors and may recommend such new legislation as deemed necessary. The Board shall adopt reasonable rules and regulations for conducting its investigations. The Building Official shall be an ex-officio nonvoting member and act as secretary. The Building Official shall keep a record of all proceedings and notify all parties concerned of the findings and decisions of the Board. There shall be a Building Rehabilitation Appeals Board as established in Section 105.3.~~

SECTION 94. Section 9907 is hereby amended to read as follows:

SECTION 9907 ALTERNATES RESERVED

~~Every member of the Building Board of Appeals (created by Section 105) is an ex-officio alternate member of the Building Rehabilitation Appeals Board and may serve in the place and stead of any regular member of the Building Rehabilitation Appeals Board who is absent from any meeting and, at such meeting, shall be deemed to be a regular member of the Building Rehabilitation Appeals Board.~~

SECTION 95. Section J101 is hereby amended to read as follows:

J101 GENERAL

J101.1 Scope.

The provisions of this Appendixchapter apply to grading, excavation and earthwork construction, including fills and embankments-, and the control of runoff from graded sites, including erosion sediments and construction-related pollutants. The purpose of this chapter is to safeguard life, limb, property, and the public welfare by regulating grading on private property. ~~Where conflicts occur between the technical requirements of this chapter and the geotechnical report, the geotechnical report shall govern.~~

J101.2 Flood hazard areas.

Unless the applicant has submitted an hydrologic and hydraulic analyses engineering analysis, prepared in accordance with standard engineering practice by a registered design professional California licensed civil engineer, that demonstrates the proposed work will not result in any increase in the level of the base flood, grading, excavation and earthwork construction, including fills and embankments, shall not be permitted in floodways designated in Chapter 11.60 of Title 11 – Health and Safety of the Los Angeles County Code or in floodways that are in flood hazard areas established in Section 1612.3 or in flood hazard areas where design flood elevations are specified but floodways have not been designated.

J101.3 General hazards.

Whenever the Building Official determines that any existing excavation, embankment, or fill on owned property has become a hazard to life and limb, or endangers property, or adversely affects the safety, use, or stability of a public way or

drainage channel, the Building Official may give written notice thereof to the owner of the property upon which the excavation, embankment or fill is located, or other person or agent in control of said property. Upon receipt of said notice, the owner or other person or agent in control of the property shall repair or eliminate such excavation, embankment, or fill so as to eliminate the hazard, in conformance with the requirements of this Code, within the period specified in said notice.

J101.4 Safety precautions.

If at any stage of the work the Building Official determines by inspection that further grading as authorized is likely to endanger any public or private property or result in the deposition of debris on any public way or interfere with any existing drainage course, the Building Official may order the work stopped by notice in writing served on any persons engaged in doing or causing such work to be done, and any such person shall immediately stop such work. The Building Official may authorize the work to proceed if the Building Official finds adequate safety precautions can be taken or corrective measures incorporated in the work to avoid likelihood of such danger, deposition or interference. If the grading work as done has created or resulted in a hazardous condition, the Building Official shall give written notice requiring correction thereof as specified in Section J101 of this Code.

J101.5 Protection of utilities.

Both the permittee and the owner of the property on which the grading is performed shall be responsible for the prevention of damage to any public and/or private utilities or services.

J101.6 **Protection of adjacent property.**

Both the permittee and owner of the property on which the grading is performed shall be responsible for the prevention of damage to adjacent property. No person shall excavate on land sufficiently close to the property line to endanger any adjoining public street, sidewalk, alley, or other public or private property without taking adequate measures to support and protect such property from settling, cracking or other damage that might result from the proposed work. Any person performing any grading that involves imported or exported materials shall take special precautions, as approved by the Building Official, to prevent such materials from being deposited on adjacent properties, any public way and/or any drainage course.

J101.7 **Storm water control measures.**

Both the permittee and the owner of the property on which the grading is performed shall put into effect and maintain all precautionary measures necessary to protect adjacent water courses and public or private property from damage by erosion, flooding, and deposition of mud, debris, and construction-related pollutants originating from the site during grading and related construction activities.

J101.8 **Maintenance of protective devices and rodent control.**

All drainage structures and other protective devices, and all burrowing rodent control measures, as shown on the grading plans approved by the Building Official, shall be maintained in a good condition and, when necessary, promptly repaired by the permittee or owner of the property on which grading has been performed or by any other person or agent in control of such property.

J101.9 **Correlation with other sections.**

The provisions of this Chapter are independent of the provisions of Chapter 99 of this Code relating to building and property rehabilitation. This Section may be applied even though the same facts have been used to determine that there is substandard property subject to the provisions of Chapter 99.

J101.10 **Conditions of approval.**

In granting any permit under this code, the Building Official may include such conditions as may be reasonably necessary to prevent creation of a nuisance or hazard to public or private property. Such conditions may include, but shall not be limited to:

1. Improvement of any existing grading to comply with the standards of this Code.
2. Requirements for fencing of excavations or fills, which would otherwise be hazardous.
3. Requirements for temporary excavations and shoring to be shown on plans.

SECTION 96. Section J102.1 is hereby amended to read as follows:

J102.1 **Definitions.**

~~The following words and terms shall, for the purposes of this appendix, have the meanings shown herein. Refer to Chapter 2 of the California Building Code for general definitions.~~ For the purposes of this Appendix, the terms, phrases and words listed in this Section and their derivatives shall have the indicated meanings.

APPROVAL. When the proposed work or completed work conforms to this Chapter, as determined by and to the satisfaction of the Building Official.

AS-BUILT. See Section J105.12.

BEDROCK. The relatively solid, undisturbed rock in place either at the ground surface or beneath superficial deposits of alluvium, colluvium and/or soil.

BENCH. A relatively level step excavated into earth material on which fill is to be placed.

BEST MANAGEMENT PRACTICE (BMP). Practices, prohibitions of practices, or other activities to reduce or eliminate the discharge of pollutants to surface waters. BMPs include structural and nonstructural controls, management practices, operation and maintenance procedures, and system, design, and engineering methods that are required to be employed in order to comply with the requirements of the National Pollution Discharge Elimination System(NPDES) permit issued to the County of Los Angeles (see Section 106.4.3 and Title 31 Los Angeles County Green Building Standards Code.)

BORROW. Earth material acquired from an off-site location for use in grading on a site.

CIVIL ENGINEER. A professional engineer licensed in the State of California to practice in the field of civil works.

CIVIL ENGINEERING. The application of the knowledge of the forces of nature, principles of mechanics and the properties of materials to the evaluation, design, and construction of civil works.

COMPACTION. The densification of a fill by mechanical means.

CUT. See "Excavation"

DESILTING BASINS. Physical structures constructed for the removal of sediments from surface water runoff.

DESIGN ENGINEER. The Civil Engineer responsible for the preparation of the grading plans for the site grading work.

DOWN DRAIN. A device for collecting water from a swale or ditch located on or above a slope, and safely delivering it to an approved drainage facility.

EARTH MATERIAL. Any rock, natural soil or fill or any combination thereof.

ENGINEERING GEOLOGIST. A geologist experienced and knowledgeable in engineering geology, holding a valid certificate of registration license as a geologist in the specialty of engineering geology issued by the State of California under the applicable provisions of the Geologist and Geophysicist Act of the Business and Professions Code.

ENGINEERING GEOLOGY. The application of geologic knowledge and principles in the investigation and evaluation of naturally occurring rock and soil for use in the design of civil works.

EROSION. The wearing away of the ground surface as a result of the movement of wind, water or ice.

EXCAVATION. The removal of earth material by artificial means, also referred to as a cut.

FIELD ENGINEER. The Civil Engineer responsible for performing the functions as set forth in Section J105.3.

FILL. Deposition of earth materials by artificial means.

GEOTECHNICAL ENGINEER. See “Soils Engineer”.

GEOTECHNICAL HAZARD. An adverse condition due to landslide, settlement, and/or slippage. These hazards include but are not limited to loose debris, slopewash, and mud flows from natural or graded slopes.

GRADE. The vertical location of the ground surface.

GRADE, EXISTING. The grade prior to grading.

GRADE, FINAL. See Section J105.7.

GRADE, FINISHED. The grade of the site at the conclusion of all grading efforts

GRADE, INITIAL. See Section J105.7

GRADE, ROUGH. See Section J105.7.

GRADING. An excavation or fill or combination thereof.

KEY. A compacted fill placed in a trench excavated in earth material beneath the toe of a slope.

LANDSCAPE ARCHITECT. A person who holds a certificate to practice landscape architecture in the State of California under the applicable landscape architecture provisions of Division 3, Chapter 3.5 of the Business and Professions Code.

LINE. The horizontal location of the ground surface.

PERMITTEE. See Section J105.6.

PRIVATE SEWAGE DISPOSAL SYSTEM. A septic tank with effluent discharging into a subsurface disposal field, into one or more seepage pits or into a combination of subsurface disposal field and seepage pit or of such other facilities as may be permitted in accordance with the procedures and requirements set forth in Title 28 Los Angeles County Plumbing Code and as required by the Los Angeles County Department of Public Health.

PROJECT CONSULTANTS. The professional consultants required by this Code which may consist of the Design Engineer, Field Engineer, Soils Engineer, Engineering Geologist, and Landscape Architect as applicable to this Chapter.

PROFESSIONAL INSPECTION. The inspection required by this code to be performed by the Project Consultants. Such inspections shall be sufficient to form an opinion relating to the conduct of the work.

QSD. Qualified SWPPP Developer as defined in the California State Construction General Permit.

QSP. Qualified SWPPP Practitioner as defined in the California State Construction General Permit.

SITE. A lot or parcel of land or contiguous combination thereof, under the same ownership, where grading is performed or permitted.

SLOPE. An inclined surface, the inclination of which is expressed as a ratio of horizontal distance to vertical distance.

SOIL. Naturally occurring superficial deposits overlying parent bedrock.

SOILS ENGINEER (GEOTECHNICAL ENGINEER). A licensed civil engineer experienced and knowledgeable in the practice of soils engineering.

SOILS ENGINEERING (GEOTECHNICAL ENGINEERING). The application of the principals of soils mechanics in the investigation, evaluation, and design of civil works involving the use of earth materials and the inspection or testing of construction thereof.

STORM DRAIN SYSTEM. A conveyance or system of conveyances, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, and man-made channels, designed or used for collecting and conveying storm water.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP). A site drawing with details, notes, and related documents that identify the measures proposed by the permittee to: (1) control erosion and prevent sediment and construction-related pollutants from being carried offsite by storm water, and (2) prevent non-storm water discharges from entering the storm drain system.

SURFACE DRAINAGE. Flows over the ground surface.

SOIL TESTING AGENCY. An agency regularly engaged in the testing of soils and rock under the direction of a Civil Engineer experienced in soil testing.

TERRACE. A relatively level step constructed in the face of a graded slope for drainage and maintenance purposes.

SECTION 97. Section J103 is hereby amended to read as follows:

SECTION J103 PERMITS REQUIRED

J103.1 Permits required.

Except as exempted in Section J103.2, no grading shall be performed without first having obtained a permit ~~therefor~~ from the ~~b~~Building ~~e~~Official. A grading permit does not include the construction of retaining walls or other structures. A separate permit shall be obtained for each site and may cover both excavations and fills. Any engineered grading as described in Section J104.2.3 shall be performed by a contractor licensed by the State of California to perform the work described hereon. Regular Grading less than 5,000 cubic yards may require a licensed contractor if the Building Official determines that special conditions or hazards exist.

J103.2 Exemptions.

1. When approved by the Building Official, Ggrading in an isolated, self-contained area, provided there is no danger to the public, and that such grading will not adversely affect adjoining properties or public rights of way.

...

7. Exploratory excavations performed under the direction of a ~~registered design professional~~Geotechnical Engineer or Engineering Geologist. This shall not exempt grading of access roads or pads created for exploratory excavations. Exploratory excavations must not create a hazardous condition to adjacent properties or the public in accordance with Section J101.3. A restoration plan must be provided and approved by the Building Official for all grading of access roads or pads. Restoration shall be completed within 90 days after the completion of soils testing unless otherwise approved by the Building Official.

8. An excavation that does not exceed 50 cubic yards (38.3 m³) and complies with one of the following conditions and as shown in Figure J103.2:

(a) Is less than 2 feet (0.6 m) in depth.

(b) Does not create a cut slope greater than 5 feet (1.5 m) measured vertically upward from the cut surface to the surface of the natural grade and is not steeper than 2 units horizontal to 1 unit vertical (50 percent slope).

9. A fill not intended to support a structure that does not obstruct a drainage course and complies with one of the following conditions and as shown in Figure J103.2:

(a) Is less than 1 foot (0.3 m) in depth and is placed on natural terrain with a slope flatter than 5 units horizontal to 1 unit vertical (20 percent slope).

(b) Is less than 3 feet (0.9 m) in depth at its deepest point measured vertically upward from natural grade to the surface of the fill, does not exceed 50 cubic yards, and creates a fill slope no steeper than 2 units horizontal to 1 unit vertical (50 percent slope).

(c) Is less than 5 feet (1.5 m) in depth at its deepest point measured vertically upward from natural grade to the surface of the fill, does not exceed 20 cubic yards, and creates a fill slope no steeper than 2 units horizontal to 1 unit vertical (50 percent slope).

Exemption from the permit requirements of this Appendix shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this Code or any other laws or ordinances of this jurisdiction.

J103.3 Unpermitted grading.

A person shall not own, use, occupy or maintain any site containing unpermitted grading. For the purposes of this Code, unpermitted grading shall be defined as either of the following:

1. Grading that was performed, at any point in time, without the required permit(s) having first been obtained from the Building Official, pursuant to Section J103.1; or
2. Grading for which a permit was obtained pursuant to this Section, but which was not completed, pursuant to Section J105, prior to the expiration of the permit, pursuant to Section 106.5.4.

J103.4 Availability of permit at site.

No person shall perform any grading that requires a permit under this Chapter unless a copy of the grading permit and approved grading plans are in the possession of a responsible person and available at the site for the Building Official's reference.

J103.5 Grading fees.

Fees shall be assessed in accordance with the provisions of this Section. The amount of the fees shall be as specified in Section 107 of this Code.

1. Plan Review Fees. When a plan or other data are required to be submitted, a plan review fee shall be paid at the time of submitting plans and specifications for review. Separate plan review fees shall apply to retaining walls or major drainage structures as required elsewhere in this Code. For excavation and fill on the same site, the fee shall be based on the volume of excavation or fill, whichever is

greater.

2. Permit Fees. A fee for each grading permit shall be paid to the Building Official at the time of issuance of the permit. Separate permits and fees shall apply to retaining walls or major drainage structures as required elsewhere in this Code.

3. Site Inspection Fee. When the Building Official finds that a visual inspection of the site is necessary to establish drainage requirements for the protection of property, existing buildings or the proposed construction, a site inspection shall be made during plan check of grading plans. A fee for such inspection shall be paid to the Building Official at the time of submitting plans and specifications for review.

J103.6 Compliance with zoning code.

The Building Official may refuse to issue a grading permit for work on a site if either the proposed grading or the proposed land use for the site shown on the grading plan application does not comply with the provisions of Title 22 – Planning and Zoning of the Los Angeles County Code.

J103.7 Grading security.

J103.7.1 Scope and purpose.

The Building Official may require a permittee or the owner(s) of the property on which the grading is proposed to occur to provide security, as a condition of the issuance of a grading permit for any grading involving more than 1,000 cubic yards (764.6 m³). Where unusual conditions or special hazards exist, the Building Official may require security for grading involving less than 1,000 cubic yards (764.6 m³). The purpose of the security shall be to guarantee the permittee's obligation to mitigate any

hazardous conditions, including flood and geotechnical hazards, that may be created if the grading is not completed in accordance with the approved plans and specifications, and to complete any work that the Building Official determines is necessary to bring the property into compliance with this Chapter.

Security required by this Section may include incidental off-site grading on property contiguous with the site to be developed, provided written consent of the owner of such contiguous property is filed with the Building Official.

The Building Official may waive the requirements for a security for the following:

1. Grading being done by or for a governmental agency.
2. Grading necessary to remove a geotechnical hazard, where such work is covered by an agreement and security posted pursuant to the provisions of Title 21 – Subdivisions of the Los Angeles County Code.
3. Grading on a site, not exceeding a slope of three horizontal to one vertical, provided such grading as determined by the Building Official will not affect drainage from or to adjacent properties.
4. Filling of holes or depressions, provided such grading will not affect the drainage from or to adjacent properties.

J103.7.2 Form of security.

The security referred to in Section J103.7.1 shall be in one of the following forms:

1. A bond furnished by a corporate surety authorized to do business in this state.
2. Cash.

3. Savings and loan certificates or shares deposited and assigned to the County as provided in Chapter 4.36 of Title 4 – Revenue and Finance of the Los Angeles County Code.

4. An instrument of credit from a financial institution subject to regulation by the state or federal government and pledging that funds in the amount required by the Building Official are on deposit and guaranteed for payment, or a letter of credit issued by such a financial institution.

J103.7.3 Amount of security.

The amount of security shall be based on the number of cubic yards of material in either excavation or fill, whichever is greater, and the cost of all drainage or other protective devices or work necessary to eliminate potential flooding and geotechnical hazards. That portion of the security valuation based on the volume of material in either excavation or fill shall be computed as follows:

100,000 cubic yards or less - 50 percent of the estimated cost of grading work.

Over 100,000 cubic yards - 50 percent of the cost of the first 100,000 cubic yards plus 25 percent of the estimated cost of that portion in excess of 100,000 cubic yards.

When the rough grading has been completed in conformance with the requirements of this Code, the Building Official may, at his or her discretion, consent to a proportionate reduction of the security to an amount estimated to be adequate to ensure completion of the grading work, site development or planting remaining to be performed. The costs referred to in this section shall be as estimated by the Building Official.

J103.7.4 Conditions.

All security shall include the conditions that the principal shall:

1. Comply with all of the provisions of this Code, applicable laws, and ordinances;
2. Comply with all of the terms and conditions of the grading permit; and
3. Complete all of the work authorized by the permit.

J103.7.5 Term of security.

The term of each security shall begin upon the filing with the Building Official and the security shall remain in effect until the work authorized by the grading permit is completed and approved by the Building Official.

J103.7.6 Default procedures.

In the event any grading for which a permit has been issued is not completed in accordance with the approved plans and specifications for said work or with all terms and conditions of the grading permit, the Building Official may declare that a default has occurred. The Building Official shall give notice thereof to the principal and surety or financial institution executing the security, or to the owner in the case of a cash bond or assignment.

The Building Official may thereafter determine the work that is necessary to mitigate any hazardous or unsafe conditions on the site and cause such work to be performed.

Where the security consists of a bond or instrument of credit, the surety or financial institution executing the security shall be responsible for the payment of all

costs and expenses incurred by the Building Official in causing such work to be performed, up to the full amount of the security. In the case of cash security or assignment, the Building Official may pay all costs and expenses incurred in causing such work to be performed from the funds deposited, and return any unused portion of such deposit or funds to the person making said deposit or assignment.

J103.7.7 Right of entry.

The Building Official or the authorized representative of any surety company or financial institution furnishing a the security shall have access to the premises described in the permit for the purpose of inspecting the work.

In the event of default, as described in Section J103.7.6, the surety or financial institution furnishing the security or the Building Official, or any person employed or engaged on the behalf of any of these parties, shall have the right to go upon the premises to perform the mitigation work, as described in Section J103.7.6.

Neither the permittee, owner, or any other person shall interfere with or obstruct the ingress into or egress from any such premises, of any authorized representative of the surety or financial institution executing the security or the Building Official engaged to perform the mitigation work, as described in Section J103.7.6.

SECTION 98.

Figure J103.2 is hereby added to read as follows:

EXCAVATIONS		FILLS	
		- NOT INTENDED TO SUPPORT STRUCTURES - DO NOT OBSTRUCT A DRAINAGE COURSE	
AN EXCAVATION WHICH IS LESS THAN 2 FT IN DEPTH AND DOES NOT EXCEED 50CY		FILL PLACED ON NATURAL GRADE NOT STEEPER THAN 5:1 AND LESS THAN 1FT DEEP	
AN EXCAVATION WHICH CREATES A CUT SLOPE NOT GREATER THAN 5FT IN HEIGHT, NOT STEEPER THAN 2:1, AND DOES NOT EXCEED 50CY		FILL LESS THAN 3FT DEEP AT ITS DEEPEST POINT THAT DOES NOT EXCEED 50CY	
		FILL LESS THAN 5FT DEEP AT ITS DEEPEST POINT THAT DOES NOT EXCEED 20CY	

FIGURE J103.2

GRADING EXEMPTION CASES

SECTION 99. Section J104 is hereby amended to read as follows:

SECTION J104 PERMIT APPLICATION AND SUBMITTALS

J104.1 Submittal requirements.

In addition to the provisions of Section ~~105.3~~106.4, and ~~1.8.4~~, as applicable, the applicant shall state the ~~estimated quantities of excavation and fill.~~ following:

1. The estimated quantities of excavation, fill, borrow, removal or combination thereof.
2. The proposed land use for the site on which the grading is to be performed.

J104.2 Site plan requirements.

In addition to the provisions of Section ~~407~~106, a grading plan shall show the existing grade and finished grade in contour intervals of sufficient clarity to indicate the nature and extent of the work and show in detail that it complies with the requirements of the Ceode. The plans shall show the existing grade on adjoining properties in sufficient detail to identify how grade changes will conform to the requirements of this Ceode.

J104.2.1 Grading designation.

Grading in excess of 5,000 cubic yards (3825 m³) or that is proposed to support any structure shall be designated as “engineered grading.” All engineered grading shall be performed in accordance with an approved grading plan and specifications prepared by a Civil Engineer, unless otherwise required by the Building Official.

Grading involving less than 5,000 cubic yards (3825 m³) and that will not support any structure shall be designated “regular grading” unless the permittee chooses to have the grading be designated as engineered grading, or the Building Official determines that, due to the existence of special conditions or unusual hazards, the grading should be designated as engineered grading.

J104.2.2 Regular grading requirements.

In addition to the provisions of Section 106, and Section J104.2, an application for a regular grading permit shall be accompanied by two sets of plans in sufficient clarity to indicate the nature and extent of the work. The plans shall give the location of the work, the name of the owner, and the name of the person who prepared the plan. The plan shall include the following information:

1. General vicinity of the proposed site.
2. Limits and depths of cut and fill.
3. Location of any buildings or structures where work is to be performed, and the location of any buildings or structures within 15 feet (4.6 m) of the proposed grading.
4. Contours, flow areas, elevations, or slopes which define existing and proposed drainage patterns.
5. Storm water mitigation measures in accordance with the requirements of Section 106.4.3 of this Code. See Section J110.8 for specific requirements.
6. Location of existing and proposed utilities, drainage facilities, and recorded public and private easements and restricted use areas.
7. Location of all recorded floodways as established by Chapter 11.60 of Title 11 – Health and Safety of the Los Angeles County Code.
8. Location of all Special Flood Hazard Areas as designated and defined in Title 44 of the Code of Federal Regulations.

J104.2.3 Engineered grading requirements.

In addition to the provisions of Section 106, and Section J104.2, an application for a permit for engineered grading shall be accompanied by plans and specifications, and supporting data consisting of a geotechnical report and engineering geology report.

Specifications shall contain information covering construction and material requirements. Plans shall be drawn to scale and shall be of sufficient clarity to indicate the nature and extent of the work proposed and shall show in detail that the proposed work will conform to the provisions of this Code and all relevant laws, ordinances, rules,

and regulations. The first sheet of each set of plans shall depict the location of the proposed work, the name and address of the owner, and the person by whom they were prepared.

The plans shall include or be accompanied by the following information:

1. General vicinity of the proposed site.
2. Property limits and accurate contours of existing ground and details of terrain and area drainage.
3. Limiting dimensions, elevations, or finish contours to be achieved by the grading, proposed drainage channels, and related construction.
4. Detailed plans of all surface and subsurface drainage devices, walls, cribbing, dams, and other protective devices to be constructed with, or as a part of, the proposed work. A map showing the drainage area and the estimated runoff of the area served by any drains shall also be provided.
5. Location of any existing or proposed buildings or structures located on the property on which the work is to be performed and the location of any buildings or structures on adjacent properties that are within 15 feet (4.6 m) of the property or that may be affected by the proposed grading operations.
6. Recommendations in the geotechnical report and the engineering geology report shall be incorporated into the grading plans or specifications. When approved by

the Building Official, specific recommendations contained in the soils engineering report and the engineering geology report, that are applicable to grading, may be included by reference.

7. The dates of the geotechnical and engineering geology reports together with the names, addresses, and phone numbers of the firms or individuals who prepared the reports.

8. A statement of the quantities of material to be excavated and/or filled. Earthwork quantities shall include quantities for geotechnical and geological remediation. In addition, a statement of the quantities of material to be imported or exported from the site.

9. A statement of the estimated starting and completion dates for proposed work.

10. A statement signed by the owner, acknowledging that a Design Engineer, Field Engineer, Geotechnical Engineer, and Engineering Geologist, when appropriate, will be employed to perform the services required by this Code, when the Building Official requires that such professional persons be so employed. These acknowledgments shall be on a form furnished by the Building Official.

11. Storm water mitigation measures are required to be shown on the grading plan in accordance with the requirement of Section 106.4.3 of this Code. See Section J1110.8 for specific requirements.

12. A drainage plan for those portions of property proposed to be utilized as a building site (building pad), including elevations of floors with respect to finish site grade and locations of proposed stoops, slabs, and fences that may affect drainage.

13. Location and type of any proposed private sewage disposal system, including the location of the expansion area.

14. Location of existing and proposed utilities, drainage facilities, and recorded public and private easements and restricted use areas.

15. Location of all recorded floodways as established by Chapter 11.60 of Title 11 – Health and Safety of the Los Angeles County Code.

16. Location of all Special Flood Hazard Areas as designated and defined in Title 44 of the Code of Federal Regulations.

J104.3 Geotechnical and engineering geology reports.

~~A geotechnical report prepared by a registered design professional shall be provided. The report shall contain at least the following:~~

- ~~1. The nature and distribution of existing soils.~~
- ~~2. Conclusions and recommendations for grading procedures.~~
- ~~3. Soil design criteria for any structures or embankments required to accomplish the proposed grading.~~
- ~~4. Where necessary, slope stability studies, and recommendations and conclusions regarding site geology.~~

The geotechnical report required by Section J104.2.3 shall include data regarding the nature, distribution, and strength of existing soils, conclusions, and

recommendations for grading procedures and design criteria for corrective measures, including buttress fills, when necessary, and an opinion on the adequacy for the intended use of sites to be developed by the proposed grading as affected by geotechnical factors, including the stability of slopes. All reports shall conform with the requirements of Section 111 and shall be subject to review by the Building Official. Supplemental reports and data may be required as the Building Official may deem necessary. Recommendations included in the reports and approved by the Building Official shall be incorporated in the grading plan or specifications.

The engineering geology report required by Section J104.2.3 shall include an adequate description of the geology of the site, conclusions, and recommendations regarding the effect of geologic conditions on the proposed development, and an opinion on the adequacy for the intended use of sites to be developed by the proposed grading, as affected by geologic factors. The engineering geology report shall include a geologic map and cross sections utilizing the most recent grading plan as a base. All reports shall conform with the requirements of Section 111 and shall be subject to review by the Building Official. Supplemental reports and data may be required as the Building Official may deem necessary. Recommendations included in the reports and approved by the Building Official shall be incorporated in the grading plan or specifications.

Exemption: A geotechnical report or engineering geology report is not required where the Building Official determines that the nature of the work applied for is such that a report is not necessary.

J104.4 Liquefaction study.

For sites with mapped maximum considered earthquake spectral response accelerations at short periods (S_s) greater than 0.5 g as determined by Section 1613, a study of the liquefaction potential of the site shall be provided and the recommendations incorporated in the plans. A geotechnical investigation will be required when the proposed work is a "Project" as defined in California Public Resources Code Section 2693, and is located in an area designated as a "Seismic Hazard Zone" as defined in Title 14 of the California Code of Regulations Section 3722 and on Seismic Hazard Zone Maps issued by the State Geologist under Public Resources Code Section 2696.

Exception: A liquefaction study is not required where the Building Official determines from established local data that the liquefaction potential is low.

SECTION 100. Section J105 is hereby amended to read as follows:

SECTION J105 INSPECTION

J105.1 General.

Grading inspections shall be governed by Section 410108, Chapter 11, Division 41 of this code, and as indicated herein. Grading operations for which a permit is required shall be subject to inspection by the Building Official. In addition, professional inspection of grading operations shall be performed by the Field Engineer, Geotechnical Engineer and the Engineering Geologist retained to provide such services in accordance with this Section for engineered grading and as required by the Building Official for regular grading.

J105.2 Special and supplemental inspections.

The special inspection requirements of Section 1705.6 shall apply to work performed under a grading permit where required by the Bbuilding Oofficial. In addition to the called inspections specified in Section J105.7, the Building Official may make such other inspections as may be deemed necessary to determine that the work is being performed in conformance with the requirements of this Code. The Building Official may require investigations and reports by an approved soil testing agency, Geotechnical Engineer and/or Engineering Geologist, and Field Engineer. Inspection reports shall be provided when requested in writing by the Building Official.

The Building Official may require continuous inspection of drainage devices by the Field Engineer in accordance with this Section when the Building Official determines that the drainage devices are necessary for the protection of the structures in accordance with Section 110.

J105.3 **Field engineer.**

The Field Engineer shall provide professional inspection of those parts of the grading project within such engineer's area of technical specialty, oversee and coordinate all field surveys, set grade stakes, and provide site inspections during grading operations to ensure the site is graded in accordance with the approved grading plan and the appropriate requirements of this Code. During site grading, and at the completion of both rough grading and final grading, the Field Engineer shall submit statements and reports as required by Sections J105.11 and J105.12. If revised grading plans are required during the course of the work they shall be prepared by a Civil Engineer and approved by the Building Official.

J105.4 **Geotechnical engineer.**

The Geotechnical Engineer shall provide professional inspection of those parts of the grading project within such engineer's area of technical specialty, which shall include observation during grading and testing for required compaction. The Geotechnical Engineer shall provide sufficient observation during the preparation of the natural ground and placement and compaction of the fill to verify that such work is being performed in accordance with the conditions of the approved plan and the appropriate requirements of this Chapter. If conditions differing from the approved geotechnical engineering and engineering geology reports are encountered during grading, the Geotechnical Engineer shall provide revised recommendations to the permittee, the Building Official, and the Field Engineer.

J105.5 **Engineering geologist.**

The Engineering Geologist shall provide professional inspection of those parts of the grading project within such engineer's area of technical specialty, which shall include professional inspection of the bedrock excavation to determine if conditions encountered are in conformance with the approved report. If conditions differing from the approved engineering geology report are encountered, the Engineering Geologist shall provide revised recommendations to the Geotechnical Engineer.

J105.6 **Permittee.**

The permittee shall be responsible for ensuring that the grading is performed in accordance with the approved plans and specifications and in conformance with the provisions of this Code. The permittee shall engage project consultants, if required

under the provisions of this Code, to provide professional inspections on a timely basis.
The permittee shall act as a coordinator between the project consultants, the contractor
and the Building Official. In the event of changed conditions, the permittee shall be
responsible for informing the Building Official of such change and shall provide revised
plans for approval.

J105.7 Required inspections.

The permittee shall call for an inspection by the Building Official at the following
various stages of work and shall obtain the approval of the Building Official prior to
proceeding to the next stage of work:

Pre-grade. Before any construction or grading activities occur at the site.
Permittee shall schedule a pregrade inspection with the Building Official. The permittee
shall ensure that all project consultants are present at the pre-grade inspection.

Initial grade. When the site has been cleared of vegetation and unapproved fill
and has been scarified, benched, or otherwise prepared for fill. No fill shall have been
placed prior to this inspection.

Rough grade. When approximate final elevations have been established,
drainage terraces, swales, and other drainage devices necessary for the protection of
the building sites from flooding have been installed, berms have been installed at the
top of the slopes, and the statements required by Section J105.12 have been received.

Final grade. When grading has been completed, all drainage devices necessary
to drain the building pad have been installed, slope planting has been established,
irrigation systems have been installed, and the as-built plans and required statements

and reports have been submitted.

J105.8 **Notification of noncompliance.**

If, in the course of fulfilling their respective duties under this Chapter, the Field Engineer, the Geotechnical Engineer, or the Engineering Geologist determines that the work is not being done in conformance with this Chapter or the approved grading plans, the Field Engineer, Geotechnical Engineer, or the Engineering Geologist shall immediately report, in writing, the discrepancies and the recommended corrective measures to the permittee and to the Building Official.

J105.9 **Transfer of responsibility.**

If the Field Engineer, the Geotechnical Engineer, or the Engineering Geologist of record is changed at any time after the grading plans required pursuant to Section J104.2.2 or J104.2.3 have been approved by the Building Official, the permittee shall immediately provide written notice of such change to the Building Official. The Building Official may stop the grading from commencing or continuing until the permittee has identified a replacement and the replacement has agreed in writing to assume responsibility for those parts of the grading project that are within the replacement's area of technical competence.

J105.10 **Non-inspected grading.**

No person shall own, use, occupy, or maintain any non-inspected grading. For the purposes of this Code, non-inspected grading shall be defined as any grading for which a grading permit was first obtained, pursuant to Section J103, above, but which has progressed beyond any point requiring inspection and approval by the Building

Official without such inspection and approval having been obtained.

J105.11 **Routine field inspections and reports.**

Unless otherwise directed by the Building Official, the Field Engineer for all engineered grading projects shall prepare routine inspection reports and shall file these reports with the Building Official as follows:

1. Bi-weekly during all times when grading of 400 cubic yards or more per week is occurring on the site;
2. Monthly, at all other times; and
3. At any time when requested in writing by the Building Official.

J105.12 **Completion of work.**

Upon completion of the rough grading work and at the final completion of the work, the following reports and drawings and supplements thereto are required for engineered grading or when professional inspection is otherwise required by the Building Official:

1. An "As-built" grading plan prepared by the Field Engineer retained to provide such services in accordance with Section J105.3 showing all plan revisions as approved by the Building Official. This shall include original ground surface elevations, as-built ground surface elevations, lot drainage patterns, and the locations and elevations of surface drainage facilities and the outlets of subsurface drains. As-built locations, elevations and details of subsurface drains shall be shown as reported by the Geotechnical Engineer.

The As-built grading plan shall be accompanied by a certification by the Field

Engineer that to the best of his or her knowledge, the work within the Field Engineer's area of responsibility was done in accordance with the final approved grading plan.

2. A report prepared by the Geotechnical Engineer retained to provide such services in accordance with Section J105.4, including locations and elevations of field density tests, summaries of field and laboratory tests, other substantiating data, and comments on any changes made during grading and their effect on the recommendations made in the approved geotechnical engineering investigation report. The report shall include a certification by the Geotechnical Engineer that, to the best of his or her knowledge, the work within the Geotechnical Engineer's area of responsibility is in accordance with the approved geotechnical engineering report and applicable provisions of this Chapter. The report shall contain a finding regarding the safety of the completed grading and any proposed structures against hazard from landslide, settlement, or slippage.

3. A report prepared by the Engineering Geologist retained to provide such services in accordance with Section J105.5, including a final description of the geology of the site and any new information disclosed during the grading and the effect of such new information, if any, on the recommendations incorporated in the approved grading plan. The report shall contain a certification by the Engineering Geologist that, to the best of his or her knowledge, the work within the Engineering Geologist's area of responsibility is in accordance with the approved engineering geology report and applicable provisions of this Chapter. The report shall contain a finding regarding the safety of the completed grading and any proposed structures against hazard from

landslide, settlement, or slippage. The report shall contain a final as-built geologic map and cross-sections depicting all the information collected prior to and during grading.

4. The grading contractor shall certify, on a form prescribed by the Building Official, that the grading conforms to said as-built plan and the approved specifications.

5. When a landscape permit is required by Section 490.1 of the California Department of Water Resources Model Water Efficient Landscape Ordinance, the Landscape Architect shall certify on a form prescribed by the Building Official that the landscaping conforms to approved landscape plans and specifications.

J105.13 Notification of completion.

The permittee shall notify the Building Official when the grading operation is ready for final inspection. Final approval shall not be given until all work, including installation of all drainage facilities and their protective devices, and all erosion-control measures have been completed in accordance with the final approved grading plan, and all required reports have been submitted and approved.

J105.14 Change of ownership.

Unless otherwise required by the Building Official, when a grading permit has been issued on a site and the owner sells the property prior to final grading approval, the new property owner shall be required to obtain a new grading permit.

SECTION 101. Section J106.1 is hereby amended to read as follows:

J106.1 Maximum cut slope.

The slope of cut surfaces shall be no steeper than is safe for the intended use, and shall be not more than one unit vertical in two units horizontal (50-percent slope)

unless the owner and owner's authorized agent furnishes a geotechnical or engineering geology report, or both justifying a steeper slope. The reports must contain a statement by the Geotechnical Engineer or Engineering Geologist that the site was investigated and an opinion that a steeper slope will be stable and will not create a hazard to public or private property, in conformance with the requirements of Section 111. The Building Official may require the slope of the cut surfaces to be flatter in slope than 2 units horizontal to 1 unit vertical if the Building Official finds it necessary for the stability and safety of the slope.

Exceptions:

1. A cut surface shall be permitted to be at a slope of 1.5 unit horizontal to one unit vertical (67-percent slope) provided that all of the following are met.

1.1 It is not intended to support structures or surcharges.

1.2 It is adequately protected against erosion.

1.3 It is no more than 8 feet (2438 mm) in height.

1.4 It is approved by the ~~b~~Building code ~~e~~Official.

1.5 Ground water is not encountered.

~~2. A cut surface in bedrock shall be permitted to be at a slope of one unit horizontal to one unit vertical (100-percent slope).~~

SECTION 102. Section J107 is hereby amended to read as follows:

SECTION J107 FILLS

J107.1 General.

Unless otherwise recommended in the geotechnical report, fills shall comply with

the provisions of this Section.

Exception: The Building Official may permit a deviation from the provisions of this Chapter for minor fills not intended to support structures, where no geotechnical report has been prepared.

J107.2 Surface Preparation.

Fill slopes shall not be constructed on natural slopes steeper than 2 units horizontal to 1 unit vertical (50 percent slope). The ground surface shall be prepared to receive fill by removing vegetation, topsoil and other unsuitable materials (including any existing fill that does not meet the requirements of this Chapter), and scarifying the ground to provide a bond with the fill material.

Subdrains shall be provided under all fills placed in natural drainage courses and in other locations where seepage is evident, except where the Geotechnical Engineer or Engineering Geologist recommends otherwise. Such sub-drainage systems shall be of a material and design approved by the Geotechnical Engineer and acceptable to the Building Official. The Geotechnical Engineer shall provide continuous inspection during the process of subdrain installations. The location of the subdrains shall be shown on a plan prepared by the Geotechnical Engineer. Excavations for the subdrains shall be inspected by the Engineering Geologist when such subdrains are included in the recommendations of the Engineering Geologist.

J107.3 Benching.

Where existing grade is at a slope steeper than one unit vertical in five units horizontal (20-percent slope) and the depth of the fill exceeds 5 feet (1,524 mm)

benching shall be provided into sound bedrock or other competent material as determined by the Geotechnical Engineer in accordance with Figure J107.3 or as determined by the Geotechnical Engineer. When fill is to be placed over a cut, a key shall be provided that is at least 10- feet (3,048 mm) in width and 2 feet (610 mm) in depth. The area beyond the toe of fill shall be sloped for sheet overflow or a paved drain shall be constructed thereon. The Geotechnical Engineer or Engineering Geologist or both shall inspect and approve the cut as being suitable for the foundation and placement of fill material before any fill material is placed on the excavation.

J107.4 Fill material.

Fill material shall not include organic, frozen or other deleterious materials. No rock or similar irreducible material greater than 12 inches (305 mm) in any dimension shall be included in fills.

Exception: The Building Official may permit placement of larger rock when the Geotechnical Engineer properly devises and recommends a method of placement, and continuously inspects the placement and approves the fill stability. The following requirements shall also apply:

1. Prior to issuance of the grading permit, potential rock disposal areas shall be delineated on the grading plan.
2. Rock sizes greater than 12 inches (0.3 m) in maximum dimension shall be 10 feet (3.0 m) or more below grade, measured vertically.
3. Rocks shall be placed so as to assure filling of all voids with well-graded soil.

4. The reports submitted by the Geotechnical Engineer shall acknowledge the placement of the oversized material and whether the work was performed in accordance with the engineer's recommendations and the approved plans.

5. The location of oversized rock dispersal areas shall be shown on the as-built plan.

J107.5 Compaction.

All fill material shall be compacted to a minimum of 90 percent of maximum density as determined by ASTM D1557, Modified Proctor, in lifts not exceeding 12 inches (305 mm) in depth within 40 feet (12.2 m) below finished grade and 93 percent of maximum dry density deeper than 40 feet (12.2 m) below finished grade, unless a lower relative compaction (not less than 90 percent of maximum dry density) is justified by the Geotechnical Engineer and approved by the Building Official. Where ASTM D 1557, Modified Proctor is not applicable, a test acceptable to the Building Official shall be used.

Field density shall be determined by a method acceptable to the Building Official. However, not less than ten percent of the required density tests, uniformly distributed, shall be obtained by the Sand Cone Method.

Fill slopes steeper than 2 units horizontal to 1 unit vertical (50 percent slope) shall be constructed by the placement of soil a sufficient distance beyond the proposed finish slope to allow compaction equipment to operate at the outer surface limits of the final slope surface. The excess fill is to be removed prior to completion or rough grading. Other construction procedures may be utilized when it is first shown to the

satisfaction of the Building Official that the angle of slope, construction method and other factors will comply with the intent of this Section.

J107.6 Maximum slope.

The slope of fill surfaces shall be no steeper than is safe for the intended use. Fill slopes steeper than one unit vertical in two units horizontal (50-percent slope) shall be justified by a geotechnical reports ~~or engineering data.~~ conforming to the requirements of Section 111, containing a statement by the Geotechnical Engineer that the site has been investigated and an opinion that a steeper fill slope will be stable and will not create a hazard to public or private property. Substantiating calculations and supporting data may be required where the Building Official determines that such information is necessary to verify the stability and safety of the proposed slope. The Building Official may require the fill slope to be constructed with a face flatter in slope than 2 units horizontal to 1 unit vertical (50 percent slope) if the Building Official finds it necessary for stability and safety of the slope.

J107.7 Slopes to receive fill.

Where fill is to be placed above the top of an existing slope steeper than 3 units horizontal to 1 unit vertical (33 percent slope), the toe of the fill shall be set back from the top edge of the existing slope a minimum distance of 6 feet (1.8 m) measured horizontally or such other distance as may be specifically recommended by a Geotechnical Engineer or Engineering Geologist and approved by the Building Official.

J107.8 Inspection of fill.

For engineered grading, the Geotechnical Engineer shall provide sufficient

inspections during the preparation of the natural ground and the placement and compaction of the fill to ensure that the work is performed in accordance with the conditions of plan approval and the appropriate requirements of this Chapter. In addition to the above, the Geotechnical Engineer shall provide continuous inspection during the entire fill placement and compaction of fills that will exceed a vertical height or depth of 30 feet (9.1 m) or result in a slope surface steeper than 2 units horizontal to 1 unit vertical (50 percent slope).

J107.9 Testing of fills.

Sufficient tests of the fill soils shall be made to determine the density and to verify compliance of the soil properties with the design requirements. This includes soil types and shear strengths in accordance with Section J111 Referenced Standards.

SECTION 103. Section J108 is hereby amended to read as follows:

SECTION J108 SETBACKS

J108.1 General.

Cut and fill slopes shall be set back from the property lines in accordance with this Section. Setback dimensions shall be measured perpendicular to the property line and shall be as shown in Figure J108.1, unless substantiating data is submitted justifying reduced setbacks and reduced setbacks are recommended in a geotechnical engineering and engineering geology report approved by the Building Official.

J108.2 Top of slope.

The setback at the top of a cut slope shall be not less than that shown in Figure J108.1, or than is required to accommodate any required interceptor drains, whichever

is greater. For graded slopes, the property line between adjacent lots shall be at the apex of the berm at the top of the slope. Property lines between adjacent lots shall not be located on a graded slope steeper than 5 units horizontal to 1 unit vertical (20 percent slope).

J108.3 Toe of fill sSlope protection.

The setback from the toe of a fill slope shall not be less than that shown by Figure J108.1. Where required to protect adjacent properties at the toe of a slope from adverse effects of the grading, additional protection, approved by the Building Official, shall be included. Such protection may include but shall not be limited to:

1. Setbacks greater than those required by Figure J108.1.
2. Provisions for retaining walls or similar construction.
3. Erosion protection of the fill slopes.
4. Provision for the control of surface waters.

J108.4 Alternate setbacks.

The Building Official may approve alternate setbacks if he or she determines that no hazard to life or property will be created or increased. The Building Official may require an investigation and recommendation by a qualified engineer or Engineering Geologist to justify any proposed alternate setback.

SECTION 104. Figure J108.1 is hereby amended to read as follows:

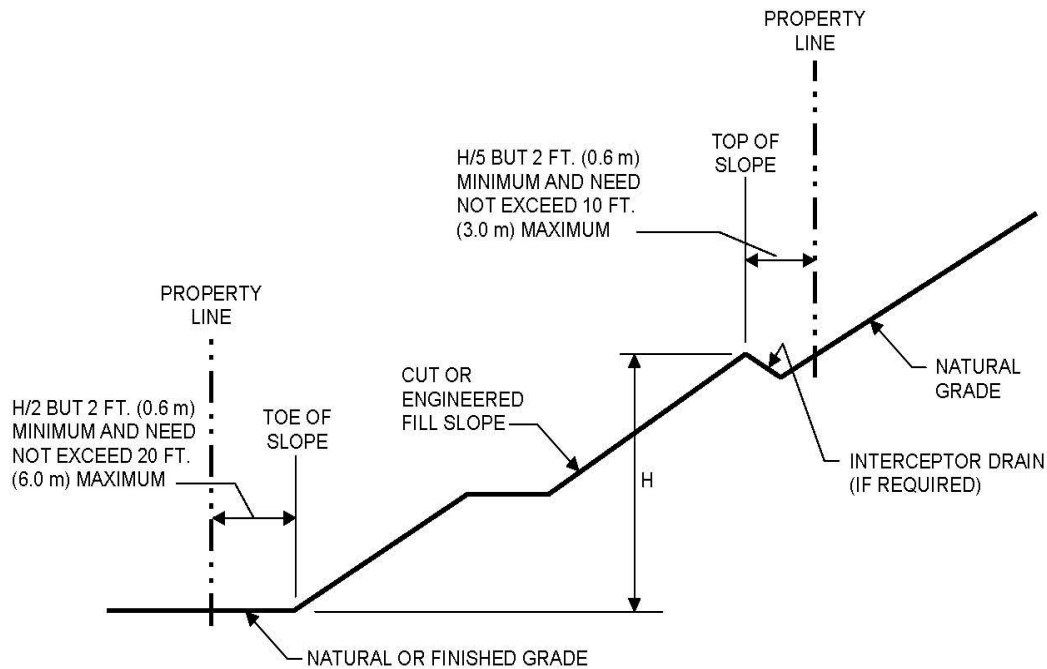


FIGURE J108.1

DRAINAGE SETBACK DIMENSIONS

SECTION 105. Section J109 is hereby amended to read as follows:

SECTION J109 DRAINAGE AND TERRACING

J109.1 General.

Unless otherwise recommended by a ~~registered~~ licensed Civil Engineer and approved by the Building Official, design professional, drainage facilities and terracing shall be provided in accordance with the requirements of ~~this s~~ Section J109.2 for all cut and fill slopes 3 units horizontal to 1 unit vertical (33 percent slope) and steeper.

Exception: ~~Drainage facilities and terracing need not be provided where the ground slope is not steeper than one unit vertical in three units horizontal (33 percent slope).~~

For slopes flatter than 3 units horizontal to 1 unit vertical (33 percent slope) and steeper than 5 units horizontal to 1 unit vertical (20 percent slope) a paved swale or ditch shall be installed at 30 foot (9.1 m) vertical intervals to control surface drainage and debris. Swales shall be sized based on contributory area and have adequate capacity to convey intercepted waters to the point of disposal as defined in Section J109.5. Swales must be paved with reinforced concrete not less than 3 inches (0.08 m) in thickness, reinforced with 6-inch (0.2 m) by 6-inch (0.2 m) No.10 by No.10 welded wire fabric or equivalent reinforcing centered in the concrete slab or an equivalent approved by the Building Official. Swales must have a minimum flow line depth of 1 foot (0.3 m) and a minimum paved width of 18 inches (0.5 m). Swales shall have a minimum gradient of not less than 5 percent. There shall be no reduction in grade along the direction of flow unless the velocity of flow is such that slope debris will remain in suspension on the reduced grade.

J109.2 Drainage Terraces.

Drainage Terraces at least 6 feet (1829 mm) 8 feet (2.4 m) in width shall be established at not more than 30-foot (9,144 mm) vertical intervals on all cut or fill slopes to control surface drainage debris. Suitable access shall be provided to allow for cleaning and maintenance.

Where more than two terraces are required, one terrace, located at approximately mid-height, shall be at least 12 feet (3658 mm) in width.

~~Swales or ditches shall be provided on terraces. They shall have a minimum gradient of one unit vertical in 30 units horizontal (5-percent slope) and shall be paved with concrete not less than 3 inches (76 mm) in thickness, or with other materials suitable to the application. They shall have a depth not less than 12 inches (305 mm) and a width not less than 5 feet (1524 mm).~~

~~A single run of swale or ditch shall not collect runoff from a tributary area exceeding 13,5000 square feet (1256 m²) (projected) without discharge into a down-drain. When only one terrace is required, it shall be at midheight. For cut or fill slopes greater than 100 feet (30.5 m) and up to 120 feet (36.6 m) in vertical height, one terrace at approximately midheight shall be 20 feet (6.1 m) in width. Terrace widths and spacing for cut and fill slopes greater than 120 feet (36.6 m) in height shall be designed by the Civil Engineer and approved by the Building Official. Suitable access shall be provided to permit proper cleaning and maintenance.~~

~~Drainage swales on terraces shall have a longitudinal grade of not less than 5 percent nor more than 12 percent and a minimum depth of 1-foot (0.3 m) at the flow line. There shall be no reduction in grade along the direction of flow unless the velocity of flow is such that slope debris will remain in suspension on the reduced grade.~~
~~Drainage swales must be paved with reinforced concrete not less than 3 inches (0.8 m) in thickness, reinforced with 6-inch (0.2 m) by 6-inch (0.2 m) No. 10 by No. 10 welded wire fabric or equivalent reinforcing centered in the concrete slab or an approved equal paving. Drainage swales shall have a minimum depth at the deepest point of 1 foot (0.3 m) and a minimum paved width of 5 feet (1.5 m). Drainage swales on terraces shall be~~

sized based on contributory area and have adequate capacity to convey intercepted waters to the point of disposal as defined in Section J109.5. Downdrains or drainage outlets shall be provided at approximately 300-foot (91.4 m) intervals along the drainage terrace or at equivalent locations. Downdrains and drainage outlets shall be of approved materials and of adequate capacity to convey the intercepted waters to the point of disposal as defined in Section J109.5.

J109.3 Interceptor drains and overflow protection.

Berms, interceptor drains, swales or other devices shall be installed along the top of cut slopes receiving drainage from a tributary width greater than 40 feet (12 192 mm), measured horizontally. to prevent surface waters from overflowing onto and damaging the face of a slope. Berms used for slope protection shall not be less than 12 inches (0.3 m) above the level of the pad and shall slope back at least 4 feet (1.2 m) from the top of the slope.

Interceptor drains shall be installed along the top of graded slopes greater than 5 feet in height receiving drainage from a slope with a tributary width greater than 30 feet (9.1 m) measured horizontally. They shall have a minimum depth of a 1 foot (305 mm) and a minimum width of 3 feet (915 mm). The slope shall be approved by the Building Official, but shall be not less than one unit vertical in 50 units horizontal (2 percent slope). The drain shall be paved with concrete not less than 3 inches (76 mm) in thickness, or by other materials suitable to the application and reinforced as required for drainage terraces. Discharge from the drain shall be accomplished in a manner to prevent erosion and shall be approved by the Building Official.

...

J109.5 **Disposal.**

All drainage facilities shall be designed to convey waters to the nearest practicable street, storm drain, or natural watercourse or drainage way approved by the Building Official or other appropriate governmental agency provided that the discharge of such waters at that location will not create or increase a hazard to life or property. Erosion of the ground in the area of discharge shall be prevented by installation of non-erosive down drains or other devices. Desilting basins, filter barriers or other methods, as approved by the Building Official, shall be utilized to remove sediments from surface waters before such waters are allowed to enter streets, storm drains, or natural watercourses. If the drainage device discharges onto natural ground, riprap or a similar energy dissipator may be required.

Building pads shall have a minimum drainage gradient of 2 percent toward an approved drainage facility or a public street unless otherwise directed by the Building Official. A lesser slope may be approved by the Building Official for sites graded in relatively flat terrain, or where special drainage provisions are made, when the Building Official finds such modification will not result in a hazard to life or property.

SECTION 106. Section J110 is hereby amended to read as follows:

SECTION J110 **SLOPE PLANTING AND EROSION CONTROL**

J110.1 **General.**

The faces of cut and fill slopes shall be prepared and maintained to control erosion. This control shall ~~be permitted to~~ consist of effective planting, erosion control blankets, soil stabilizers or other means as approved by the Building Official.

Exception: Erosion control measures need not be provide on cut slopes not subject to erosion due to the erosion resistant character of the materials as approved by the Project Consultants, to the satisfaction of the Building Official.

...

J110.3 **Planting.**

The surface of all cut slopes more than 5 feet (1.5 m) in height and fill slopes more than 3 feet (0.9 m) in height shall be protected against damage from erosion by planting with grass or ground cover plants. Slopes exceeding 15 feet (4.6 m) in vertical height shall also be planted with shrubs, spaced at not to exceed 10 feet (3 m) on centers, or trees, spaced at not to exceed 20 feet (6.1 m) on centers; or a combination of shrubs and trees at an equivalent spacing, in addition to the grass or ground cover plants. The plants selected and planting methods used shall be suitable for the soil and climatic conditions of the site.

Plant material shall be selected which will produce a coverage of permanent planting to effectively control erosion. Consideration shall be given to deep-rooted plant material needing limited watering, maintenance, high root to shoot ratio, wind susceptibility, and fire-retardant characteristics. All plant materials must be approved by the Building Official.

Planting may be modified for the site if specific recommendations are provided by

both the Geotechnical Engineer and a Landscape Architect. Specific recommendations must consider soils and climatic conditions, irrigation requirements, planting methods, fire-retardant characteristics, water efficiency, maintenance needs, and other regulatory requirements. Recommendations must include a finding that the alternative planting will provide a permanent and effective method of erosion control. Modifications to planting must be approved by the Building Official prior to installation.

J110.4 Irrigation.

Slopes required to be planted by Section J110.3 shall be provided with an approved system of irrigation that is designed to cover all portions of the slope. Irrigation system plans shall be submitted to and approved by the Building Official prior to installation. A functional test of the system may be required.

For slopes less than 20 feet (6.1 m) in vertical height, hose bibs to permit hand watering will be acceptable if such hose bibs are installed at conveniently accessible locations where a hose no longer than 50 feet (15.2 m) is necessary for irrigation.

Irrigation requirements may be modified for the site if specific recommendations are provided by both the Geotechnical Engineer and a Landscape Architect. Specific recommendations must consider soils and climatic conditions, plant types, planting methods, fire-retardant characteristics, water efficiency, maintenance needs, and other regulatory requirements. Recommendations must include a finding that the alternative irrigation method will sustain the proposed planting and provide a permanent and effective method of erosion control. Modifications for irrigation systems must be approved by the Building Official prior to installation.

J110.5 **Plans and specifications.**

Planting and irrigation plans shall be submitted for slopes which are required to be planted and irrigated pursuant to Sections J110.3 and J110.4. Except as otherwise required by the Building Official for minor grading, the plans for slopes 20 feet (6.1 m) or more in vertical height shall be prepared and signed by a Civil Engineer or Landscape Architect. If requested by the Building Official, planting and irrigation details shall be included on the grading plan.

J110.6 **Rodent control.**

Fill slopes shall be protected from potential slope damage by a preventative program of rodent control.

J110.7 **Release of security.**

The planting and irrigation systems required by this Section shall be installed as soon as practical after rough grading. Prior to final approval of grading and before the release of the grading security, the planting shall be well established and growing on the slopes and there shall be evidence of an effective rodent control program.

J110.8 **National Pollutant Discharge Elimination System (NPDES) compliance**

J110.8.1 **General.**

All grading plans and permits and the owner of any property on which such grading is performed shall comply with the provisions of this Section for NPDES compliance.

All best management practices shall be installed before grading begins or as

instructed in writing by the Building Official for unpermitted grading as defined by Section J103.3. As grading progresses, all best management practices shall be updated as necessary to prevent erosion and to control construction-related pollutants from discharging from the site. All best management practices shall be maintained in good working order to the satisfaction of the Building Official until final grading approval has been granted by the Building Official and all permanent drainage and erosion control systems, if required, are in place. Failure to comply with this Section is subject to “Noncompliance Penalties” pursuant to Section J110.8.5. Payment of a penalty shall not relieve any persons from fully complying with the requirements of this Code in the execution of the work.

J110.8.2 Storm Water Pollution Prevention Plan (SWPPP).

The Building Official may require a SWPPP. The SWPPP shall contain details of best management practices, including desilting basins or other temporary drainage or control measures, or both, as may be necessary to control construction-related pollutants which originate from the site as a result of construction-related activities. When the Building Official requires a SWPPP, no grading permit shall be issued until the SWPPP has been submitted to and approved by the Building Official.

For unpermitted grading as defined by Section J103.3 upon written request a SWPPP in compliance with the provisions of this Section and Section 106.4.3 for NPDES compliance shall be submitted to the Building Official. Failure to comply with this Section is subject to “Noncompliance Penalties” per Section J110.8.5. Payment of a penalty shall not relieve any persons from fully complying with the requirements of this

Code in the execution of the work.

J110.8.3 Erosion and Sediment Control Plans (ESCP).

Where a grading permit is issued and the Building Official determines that the grading will not be completed prior to November 1, the owner of the site on which the grading is being performed shall, on or before October 1, file or cause to be filed with the Building Official a ESCP. The ESCP shall include specific best management practices to minimize the transport of sediment and protect public and private property from the effects of erosion, flooding, or the deposition of mud, debris, or construction-related pollutants. The best management practices shown on the ESCP shall be installed on or before October 15. The plans shall be revised annually or as required by the Building Official to reflect the current site conditions.

The ESCP shall be accompanied by an application for plan checking services and plan-checking fees in an amount determined by the Building Official, up to but not exceeding 10 percent of the original grading permit fee.

Failure to comply with this Section is subject to “Noncompliance Penalties” pursuant to Section J110.8.5. Payment of a penalty shall not relieve any persons from fully complying with the requirements of this Code in the execution of the work.

J110.8.4 Storm Water Pollution Prevention Plan (SWPPP), effect of noncompliance.

Should the owner fail to submit the SWPPP or the ESCP as required by Section J110.8 or fails to install the best management practices, it shall be deemed that a default has occurred under the conditions of the grading permit security. The Building

Official may thereafter enter the property for the purpose of installing, by County forces or by other means, the drainage, erosion control, and other devices shown on the approved plans, or if there are no approved plans, as the Building Official may deem necessary to protect adjoining property from the effects of erosion, flooding, or the deposition of mud, debris or constructed-related pollutants.

The Building Official shall also have the authority to impose and collect the penalties imposed by Section J110.8.5. Payment of a penalty shall not relieve any persons from fully complying with the requirements of this Code in the execution of the work.

J110.8.5 Noncompliance penalties.

The amount of the penalties shall be as follows:

1. If a SWPPP or a ESCP is not submitted as prescribed in Sections J110.8.2 and J110.8.3:

<u>Grading Permit Volume</u>	<u>Penalty</u>
<u>1-10,000 cubic yards (1-7645.5 m³)</u>	<u>\$ 50.00 per day</u>
<u>10,001-100,000 cubic yards (7646.3-76455 m³)</u>	<u>\$250.00 per day</u>
<u>More than 100,000 cubic yards (76455 m³)</u>	<u>\$500.00 per day</u>

2. If the best management practices for storm water pollution prevention and wet weather erosion control, as approved by the Building Official, are not installed as prescribed in this Section J110.8:

<u>Grading Permit Volume</u>	<u>Penalty</u>
<u>1-10,000 cubic yards (1-7645.5 m³)</u>	<u>\$100.00 per day</u>
<u>10,001-100,000 cubic yards (7646.3-76455 m³)</u>	<u>\$250.00 per day</u>

<u>More than 100,000 cubic yards (76455 m³)</u>	<u>\$500.00 per day</u>
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NOTE: See Section 108 for inspection request requirements.

SECTION 107. Section J111 is hereby amended to read as follows:

SECTION J111 REFERENCED STANDARDS

These regulations establish minimum standards and are not intended to prevent the use of alternate materials, methods or means of conforming to such standards, provided such alternate has been approved by the Building Official.

The Building Official shall approve such an alternate provided he or she determines that the alternate is, for the purpose intended, at least the equivalent of that prescribed in this Code in quality, strength, effectiveness, durability and safety.

The Building Official shall require that sufficient evidence or proof be submitted to substantiate any claims regarding the alternate.

The standards listed below are recognized standards. Compliance with these recognized standards shall be prima facie evidence of compliance with the standards set forth in Sections J104 and J107.

<u>ASTM D 1557</u> <u>– Latest</u> <u>Revision</u>	<u>Laboratory Characteristics Compaction of Soil Using Modified Effort</u>	<u>J107.5</u>
<u>ASTM D 1556</u> <u>– Latest</u> <u>Revision</u>	<u>Density and Unit Weight of Soils In Place by the Sand Cone Method</u>	<u>J104.2.3,</u> <u>J104.3 and</u> <u>J107.9</u>
<u>ASTM D 2167</u> <u>– Latest</u> <u>Revision</u>	<u>Density and Unit Weight of Soils In Place by the Rubber Balloon Method</u>	<u>J104.2.3</u> <u>J104.3 and</u> <u>J107.9</u>
<u>ASTM D 2937</u> <u>– Latest</u> <u>Revision</u>	<u>Density of Soils in Place by the Drive Cylinder Method</u>	<u>J104.2.3</u> <u>J104.3 and</u> <u>J107.9</u>
<u>ASTM D 2922</u> <u>– Latest</u>	<u>Density of Soil and Soil Aggregate In Place by Nuclear Methods</u>	<u>J104.2.3</u> <u>J104.3 and</u>

<u>Revision</u>		<u>J107.9</u>
<u>ASTM D 3017</u> <u>– Latest</u> <u>Revision</u>	<u>Water Content of Soil and Rock in Place by</u> <u>Nuclear Methods</u>	<u>J104.2.3,</u> <u>J104.3 and</u> <u>J107.9</u>

ASTM ~~Test Method for Laboratory Compaction Characteristics of~~ J107.5
D1557-12 ~~Soil Using Modified Effort [56,000 ft-lb/ft³ (2,700kN-m/m³)]~~